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AIR CONDITIONING & REFRIGERATION News

THE NEWSPAPER OF THE INDUSTRY

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INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

Stories of the Week
Gags of the Week
Definition of the Week
America Needs More Good Salesmen
Eisenhower Inherits a Bad Job
Add Human Interest
Perk Up, Man!

Stories of the Week

Pecan ranches normally thrive—if the trees survive infancy. However, half the pecan roots planted in California die young. Thus it happens that the raisers are easy marks for patent-medicine vendors.

"Fella who calls himself Indian Jim is selling us wonderful stuff," a delighted Sucker wrote his brother. "Sprayed around the roots it saves our trees. We don't know what's in the bottle, but it must be sensational. All we do is put one tablespoonful into 10 gallons of water, and spray the mixture around each tree every week."

Brother Sam bought some of that wonderful stuff. The panacea worked, His trees were saved from blight, and yielded bountifully.

What was in the bottles? Nothing but colored water!

In a lax moment "Indian Jim" confessed to a California newsman:

"That ten gallons of water each week does it," the old mountebank revealed. "If I told them to douse their pecan plants with plain water, they wouldn't do it. Too much bother. Planters work extra hard only if they've *invested* in a trick cure."

Oughtta be a moral there somewhere.

From a small town (St. Johns, Mich.) Dale Stafford forged ahead to become Managing Editor of the *Detroit Free Press*. Having attained that pinnacle, he moved back to a small city again. As the editor and publisher of the *Greenville* (Mich.) *Daily* he was completely happy.

All this philosophical prefacing leads up to a story. Dale hired the son of an advertiser in Greenville. After six days the lad quit.

"Don't you like the newspaper business?" Dale queried.

"Naw. Sorry I learned it."

Gags of the Week

We used to look forward to retiring, but now that doctors have decided we must spend those sunset years messing around with tropical fish or building bookcases in the basement, it sounds easier to just keep on at the office.—*Detroit News.*

Some people think they are big shots just because they explode.—*Arkansas Baptist.*

A girl usually becomes a woman when she stops giggling and begins to calculate.

Worry is like a rocking chair; it gives you something to do, but never gets you anywhere.—*Christian Advocate.*

Definition of the Week

Quoted from the 1952 annual report of the *National Press Club* (Washington, D. C.):

"The Bar Committee did not meet during the year, but its members were in constant attendance at the bar."

America Needs More Good Salesmen

America's greatest need today is a lot of *more enthusiastic* salesmen, according to H. E. Humphreys, Jr., president of the United States Rubber Co. In a talk before the National Association of Manufacturers he averred:

"More emphasis must be placed on selling if we are to build a sound, prosperous economy and provide more jobs for our growing population."

He pointed out that industry's capacity to sell has not kept pace with the increase in productive capacity since the beginning of World War II.

(Concluded on Page 6, Column 4)

Long Beach, Minneapolis, and Atlanta Chosen for Educational Conferences

WASHINGTON, D.C.—Long Beach, Calif., Minneapolis, and Atlanta have been selected as the three sites for the Refrigeration and Air Conditioning Educational Conferences and Exhibits to be held in 1954-1955, it has been announced by the Air Conditioning and Refrigeration Institute.

First of the series of the Educational Conferences will be held March 11-12-13 in the Long Beach Municipal Auditorium. The Wilton hotel will be the headquarters for exhibitors. The Long Beach Conference will be held in conjunction with the state convention of California RSES chapters.

Second in the series of Conferences will be held in November, 1954, at Minneapolis. Tentative dates are Nov. 18-19-20 and will coincide with the annual national convention of Refrigeration Service Engineers Society.

The third of the sessions will be held in the Spring of 1955 in Atlanta, with exact dates to be announced later.

Space in the Educational Exhibits will be available without charge to those firms who were exhibitors at the 8th All-Industry Refrigeration & Air Conditioning Exposition. At previous Conferences about 75 exhibits was the average.

A number of changes have been made in the operating setup of the Educational Conferences and Exhibits as follows:

1. The event will henceforth be known as the "ARI Educational Conference."

2. Future conferences will be held on Thursday, Friday, and Saturday instead of Friday, Saturday, and Sunday.

3. RACCA, REWA, and NCRSA have been invited to plan and carry on independent speaking programs or regional meetings to run concurrently with those of RSES in conjunction with educational exhibits.

4. Hours for the Conferences and Exhibits have been changed as follows:

THURSDAY

Speaking program: 9 to 12 and 1 to 3.

Exhibition open: 3 to 6 and 7 to 10.

FRIDAY

Speaking program: 9 to 12 and 1 to 3.

Exhibits open: 3 to 6 and 7 to 10.

SATURDAY

Speaking program: 10 to 12 noon.

Exhibits open: 12 noon to 6.

Banquet: 7 p.m.

5. The program for Saturday morning will be of a general nature.

G-E Announces Heat Pump Price Cuts of 20-25%

BLOOMFIELD, N. J.—A price decrease of 20 to 25% on General Electric heat pumps has been announced.

H. M. Brundage, general manager of the G-E Weathertron Dept., under which name the company's all-electric year-round air conditioner is marketed, credited rapid market development, improved product design, and increasing demand for the product as responsible for the price reduction.

Predicting industry sales in 1954 would increase three-fold over this year's sales, Brundage said that prior to the price reduction the installed cost of the "Weathertron" in the home ranged for $3,000 to $4,000, depending on the necessary ductwork, and size and type of home.

(Concluded on Back Page, Column 1)

Refrigerator-Freezer Has Low Temp. Area on Bottom

HUDSON, Wis.—A new refrigerator-freezer which "combines normal refrigeration capacity with an exceptional capacity for freezing foods" is now in production for the consumer market by United Refrigerator Co. here.

Called "Refrig-N-Freez," the unit has a 7-cu. ft. refrigerator on top and a 350-lb. capacity freezer on the bottom for handy freezer storage in the kitchen.

(Concluded on Back Page, Column 5)

Sept. Freezer Sales Down But 9-Month Total Rises

NEW YORK CITY—Although September sales of farm and home freezers by companies reporting to the National Electrical Manufacturers Association declined from August and a year ago, unit sales for the first nine months of the year were more than 68,000 ahead of the like 1952 period, association statistics show.

Nine-month sales amounted to

(Concluded on Page 4, Column 2)

Kelvinator Appliance Volume Shows 39% Increase In '53

ATLANTA, Ga., Dec. 7—Kelvinator executives today saluted the company's national field organization for achieving an appliance volume increase of more than 39% in fiscal 1953 over the previous year.

Charles T. Lawson, vice president of Nash-Kelvinator Corp. in charge of appliance distribution, made the announcement to Southeastern Kelvinator distributors today at the opening of a three-day meeting on 1954 products and sales plans.

While much of the increase resulted from new lines introduced by Kelvinator during the year, he pointed out that Kelvinator's traditional volume leaders, household refrigerators and electric ranges, also shared in the increase.

Lawson said Kelvinator's 1954 product lines have been streamlined, with striking new features in some series and entirely new products of "revolutionary" design in others.

The distributor group was to get its first glimpse of Kelvinator's new products today. Lawson added that details of the new line which he said would "set off a strong industry reaction to the benefit of the retailer and the consumer" would be revealed publicly next week.

3 New Products Set for Jordon Line for 1954

PHILADELPHIA — Three new products — a dual-temperature upright home freezer and refrigerator combination designed for kitchen use, a 12-cu. ft. upright home freezer, and room air conditioners in three sizes—are included in the 1954 line of Jordon Sales Co.

(Domestic equipment manufactured by Jordon Refrigerator Co. is sold through Jordon Sales Co.)

In addition, the 1954 Jordon line includes improvement in the "Hostess" (J-16) and "Lady Jordon" (J-22) models of upright home freezers. These are part of the Jordon "Gold-Tone" line of freezers.

The expanded line of room air conditioners, featuring pushbutton controls, consists of ½-hp. (J-50), ¾-hp. (J-75), and 1-hp. (J-100) units. This year, the company made only a ¾-hp. unit. List prices are: J-50, $319; J-75, $369; J-100, $449.

The dual-temperature appliance includes a combination of approximately 10 cu. ft. of freezer space and

(Concluded on Page 4, Column 4)

Blast Freeze To Build, Sell Iceberg Lockers

CHICAGO—Blast Freeze Co. here has obtained the exclusive commercial rights under which the Iceberg "warm room" refrigerated lockers were constructed, and will build and merchandise this equipment early next year, it has been announced.

The new units will be substantially the same as those now in service with the addition of automatic defrosting as a standard accessory on all models, it is stated.

The former Iceberg series 100

(Concluded on Page 4, Column 3)

Warren Co. Elects Harris President, Jacobs Exec. Vice Pres.

ATLANTA — Virgil P. Warren, chairman of the board of directors of The Warren Co., Inc. here, has announced the election of John D. Harris as president, and Roger D. Jacobs as executive vice president.

Harris, formerly executive vice president, succeeds Warren, who continues as chairman of the board. Jacobs remains in charge of sales.

Thirty-one years ago, Harris came from his native Alabama to Atlanta to work for a large food chain after attending Birmingham-Southern college. Later he joined the Warren firm.

(Concluded on Back Page, Column 1)

NARDA Head Asks Labor Unions To Stop Backdoor Selling Practices

CHICAGO — "Labor unions and trade associations have a joint responsibility to bring the various industries to which we belong to maximum prosperity and health," stated Wallace Johnston, president of the National Appliance and Radio-TV Dealers Association, in letters addressed to George Meany and Walter P. Reuther, presidents, respectively, of the A F of L and the CIO. "In this way we can help to hold the national economy high even with the decline in military production, and replace that output with much more stable peacetime production.

"Your role is that of making quantities of good product. Ours is that of vigorous creative selling. And our common objectives are uniform, high employment ratios and a dynamic merchandising activity that prevents a glut of goods from gradually clogging up the pipelines and shutting down production lines.

"We are handicapped in our work by people with 'connections,' group buying, such activities as 'union discount stores,' many of which have no official sanction. The salesman who creates a sale only to find it deflected by someone who could get it for the customer wholesale is soon

(Concluded on Page 4, Column 2)

Bright Future Forecast for Appliances

Packard Predicts Start of 10-Yr. Replacement Market; Price Sees Swing from TV

ATLANTA, Ga.—A top appliance manufacturer sales executive (Dan Packard of Kelvinator) and a leading appliance retailer (Harry B. Price of Norfolk, Va.) did some "crystal ball gazing" during the recent sales conference of the Southeastern Electric Exchange here and came up with some interesting and generally encouraging conclusions about the immediate future of major appliance sales.

The following are some of Packard's predictions:

1) For 1953, about 11½ million major appliances will be sold at retail. Sales should continue at this rate for the next two years. 1956 will see the start of an upturn in the number of family formations, and a 10-year replacement market that will bring "years of prosperity."

2) There are about 16,000 less retailers of appliances in business now than there were at the peak a couple of years ago, but it isn't likely that the weeding out process will continue to that extent in the next couple of years.

3) There is "nothing in the picture tending towards lower prices. We can't see appliances being built and sold at prices at which some

(Concluded on Back Page, Column 3)

Oct. Appliance Sales Up 32% In Nashville

NASHVILLE, Tenn. — October sales of electric ranges, water heaters, refrigerators, food freezers, and clothes dryers by Nashville dealers were up 32% from the like 1952 month, according to Nashville Electric Service.

Unit sales of the five appliances totaled 1,630, compared with 1,237 in October of last year.

Biggest gain was shown by freezers, with 174 being sold during October, 1953, against 30 a year ago. Comparative sales of the other appliances were as follows: ranges, 444 and 416; water heaters, 488 and 436; refrigerators, 432 and 355; dryers, 92 (no comparative total given).

B-W Acceptance Corp. Formed To Aid Retailer

CHICAGO — Formation of B-W Acceptance Corp. to provide retailers of Norge Div. of Borg-Warner Corp. with adequate floor plan inventories at a minimum investment has been announced.

Full scale operations of the new organization will begin immediately, according to Roy C. Ingersoll, president of Borg-Warner.

Norge distributors will offer BWAC financing to Norge dealers in areas where other financing services are not equipped to handle dealer credit. Rates and terms will be consistent with those offered by independent finance companies currently

(Concluded on Back Page, Column 2)

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Allied Chemical Expands 'Genetron' Production At Baton Rouge Plant

NEW YORK CITY—A major expansion in the "Genetron" refrigerant manufacturing facilities of General Chemical Div., Allied Chemical & Dye Corp., is well under way at the company's Baton Rouge, La., works, it was announced recently.

The company reported that increasing tonnages of the refrigerants, dichlorodifluoromethane and trichloromonofluoromethane, which General markets as "Genetron" 12 and "Genetron" 11, are already pouring off the line as a result of work finished to date on the expansion program.

These two organic fluorine chemicals are the big "work horse" refrigerants in the refrigeration and air conditioning industry, it was pointed out.

Production capacity of the large new Baton Rouge plant will be tripled by this expansion, which is scheduled for completion by February, 1954.

General Chemical started producing "Genetron" refrigerants in 1952, after extensive testing and experimentation. When its new production facilities are fully operating next spring, the company estimates that the requirements of the refrigeration and air conditioning industry for these basic chemicals will be well supplied for the foreseeable future.

Stocks of "Genetron" refrigerants are being carried at General Chemical warehouses in key points across the country.

Grant Elected Carrier Vice Pres. To Head New Central Engineering Staff

SYRACUSE—Walter A. Grant has been elected a vice president of Carrier Corp. This was announced recently by Cloud Wampler, president, who stated that Grant will head the newly created central engineering staff of the corporation.

Walter A. Grant

A member of the Carrier organization since 1928, Grant has established an international reputation as an authority in air conditioning research, development, and engineering. He was for the past five years director of research of Carrier Corp. With the late Dr. Willis H. Carrier and R. E. Cherne, Grant was co-author of the recently revised textbook and basic engineering guide, "Modern Air Conditioning, Heating, and Ventilating."

He holds degrees of Bachelor of Arts, Bachelor of Science, and Mechanical Engineering. He joined Carrier as a student engineer.

Author of numerous technical papers, in addition to the textbook, Grant has played a major part in research and the development of important advances in the fields of air conditioning and refrigeration.

He is an active member of ASHVE, ASRE, and AAAS.

Bonus Bonds Offered with I-H Refrigerator, Freezer

CHICAGO—In an effort to increase dealer orders of International Harvester refrigeration products in this area, RCA Victor Distributing Corp. here is offering one or two $25 Series E U. S. Treasury bonds with each purchase of an I-H refrigerator or freezer.

Under the "Bonds for Boxes" program, a dealer can either offer the bond as a sales incentive for his floor salesmen or use the proceeds in place of a cash discount from the distributor, according to Ralph Bates, Chicago appliance sales manager.

The distributor is offering two bonds with the purchase of refrigerator models L-84, L-84D, L-85, L-105D, and L-105DM, and freezer models L-9V, L-14V, and L-16. One bond is given on refrigerator models L-74, L-82, L-103, and L-100D, and freezer model L-7, as well as L-12 and L-20.

LeRoy Ranney, Ranney Refrigerator Pres., Dies

GREENVILLE, Mich. — LeRoy W. Ranney, 65, president of Ranney Refrigerator Co., died recently at his home here.

Ranney, son of F. E. Ranney, founder of the company, had been ill for three months.

He joined the family company 41 years ago and was vice president before becoming president in 1937. His brother, Ellis W. Ranney, with whom he was associated in direction of the company, died in 1946.

Countertop Display Case Answers Baker's Problem Of Refrigerated Storage

ST. LOUIS—A tiny refrigerated case, which can hold approximately 24 ice cream, or whipped cream specialties, is producing many additional sales for Zimmerer's bakery here.

Max Zimmerer, veteran St. Louis baker, hit upon the idea of this custom-built refrigerated case early this year. Anxious to enter the whipped cream specialties field, he was, nevertheless, hampered by space limitations in the bakery.

Not easily discouraged, Zimmerer went to a St. Louis refrigeration dealer who offered the solution in a countertop case small enough to be moved around the bakery, as well as into the window, and which would function at temperatures of 25° F. or less.

Built of stainless steel, the small case is 3 ft. long, 2½ ft. high, and 16 in. deep. A single refrigeration coil is installed in loops along the stainless steel rear wall of the showcase, and the compressor, fan, and necessary refrigeration apparatus is compactly housed in the rear. The entire unit stands on four short legs, also of stainless steel, and can easily be handled by two people.

Best selling point, Zimmerer has found, is atop the wall counter, immediately behind the sales counter, where most of the bakery's customers, pay for purchases. With a single fluorescent lamp lighting the interior, the tiny case is serviced from a walk-in refrigerator at the rear of the bakery.

Most popular items it was found are whipped cream and chocolate eclairs with cream puffs and whipped cream pies close contenders. "Everyone notices the case, and comments about it," Zimmerer said. "It has paid for itself rapidly in extra profits."

Lenz Heads Promotion for Kelvinator's Buffalo Zone

BUFFALO—Roland H. Davison, zone manager of Kelvinator Div. of Nash-Kelvinator Sales Corp., announced the appointment of Arthur J. Lenz as sales promotion and advertising manager for the Buffalo zone.

'Precipitron' Features Pushbutton Wash Cycle

BOSTON—A new "low-cost" electronic air-cleaning unit, the "PX Precipitron," is available from Westinghouse Electric Corp.

Combining 90% cleaning efficiency with a simple pushbutton method of spray-washing, the new unit cuts maintenance costs and eliminates inside-the-duct washing of cells, according to the company.

"Accumulated dirt on the electronic collector-plate surfaces of the unit is flushed away by penetrating hot water from needle-spray nozzles attached to a motorized header," the company explained. "After moving slowly across the unit's face, the header automatically reverses and returns to the start position.

"The same traveling header applies an adhesive oil to the collector-plate surfaces when washing is completed. The oil binds collected dirt together and acts as a solvent for the wash operation."

Astral Files Bankruptcy Petition; Receiver Named

JERSEY CITY, N. J.—At a hearing before Referee William T. Cahill, Harold Oakin, Richfield attorney, was appointed permanent receiver of Astral Industries, according to A. J. Kravetz of Mobile A. Service Organization here, secretary of the creditors' committee.

Astral, which manufactures portable refrigerators at Rockleigh, N. J., has filed a Chapter XI petition and creditors' meetings have been held in Kravetz's office.

At the hearing, an unofficial committee was given official status. The court allowed the debtor until Nov. 24 either to post indemnity or produce an acceptable plan. Roger A. Brown of Calkin & Holden, New York, is committee chairman, and Sanford Silverman, Newark, committee attorney.

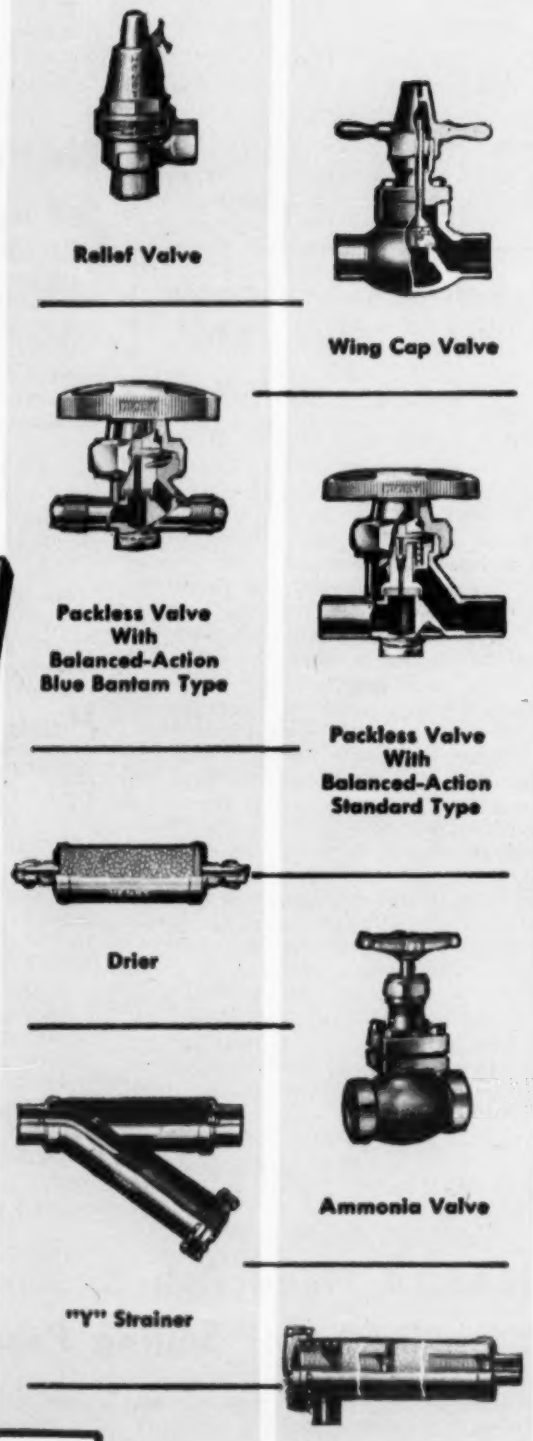
A summary as of Sept. 30 indicated Astral liabilities were $1,277,608 and assets $744,026.

The plan proposed in the Chapter XI proceedings was to sell $300,000 worth of stock which had been authorized but unissued and pay creditors from the proceeds.

The Industry's confidence in Henry Products is reflected by the largest demand in the Company's production history over the past 40 years

HENRY

Valves, Driers and Strainers



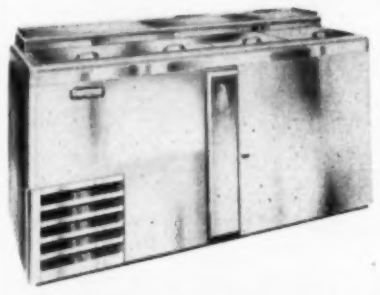
Henry Valve Co.

Melrose Park, Illinois (Chicago Suburb)
Cable: Hevalco, Melrose Park, Illinois

HENRY VALVE CO — CONTROLLING FLOW — SINCE 1914

Valves • Driers • Strainers • Control Devices and Accessories for Refrigeration • Air Conditioning and Industry Applications

Beverage-Air BOTTLE COOLERS for every installation!

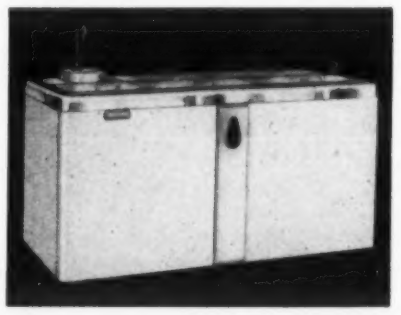


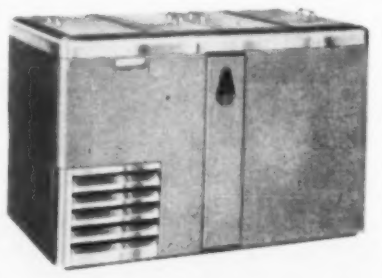
COMMERCIAL TYPE

Available in 16 different models, with capacities from 12 to 30 cases of twelve ounce bottles in completely self-contained cabinets, ready to plug-in, and remote cabinets (less refrigeration units) with capacities of 16 to 34 cases. One series features all stainless steel tops, balance of exterior in either stainless steel or tan hammerene enamel; a budget series features all baked-on enamel exterior finish, except lids and top railing which is stainless steel. All are equipped with the Beverage-Air heavy duty forced air cooling system. Model BC63-S, stainless steel exterior, shown here.

WET OR DRY TYPE CAFETERIA COOLERS

Available in two sizes, 48 and 63 inches long with capacities for 12 and 19 cases of six ounce bottles. All models are complete with ¼ H.P. Hermetic units and can be used for either wet-or-dry cooling by a simple turn of the control knob. Lids and top railing in polished stainless steel, balance of exterior in white enamel or stainless steel. Other colors optional. A cooler of quality for school and other institutional or dairy use. Model CA63-SW, white enameled exterior, shown here. Water station optional on all models.





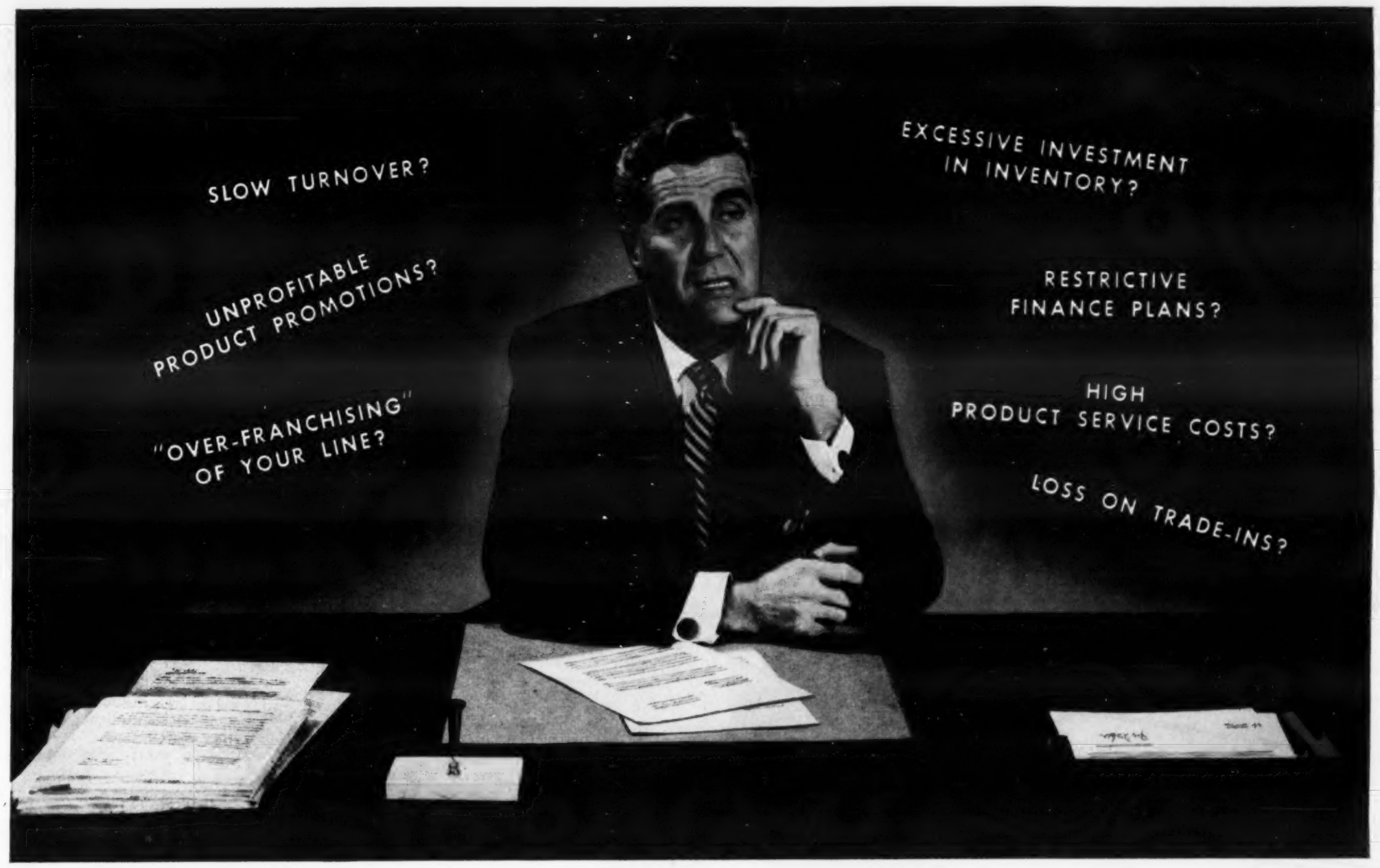
DRY TYPE CAFETERIA COOLERS

Available in two sizes, 48 and 63 inches long with capacities for 18 and 24 cases of six ounce bottles. Interior is offset at compressor housing allowing greater capacity . . . . . equipped with the Beverage-Air heavy duty forced air cooling system. Lids and top railing in polished stainless steel, balance of exterior in tan hammerene enamel or stainless steel. Other colors optional. Designed primarily to accommodate volume sales where floor area is at a premium. Model CA48-S, tan enameled exterior, shown here.

WRITE TODAY FOR DETAILS

The wide selection of cabinet styles, capacities and types coupled with Beverage-Air Super Cooling performance provide the utmost in modern refrigeration for cooling bottled and packaged goods. All cabinets feature polished stainless steel lids and top railing with welded corners ground smooth to a matching finish adding years to the appearance and quality, . . . there's a Beverage-Air Bottle Cooler to suit every installation.

THE PUNXSUTAWNEY CO. PUNXSUTAWNEY, PA.



Kelvinator Dealers will get the Answers To These Problems at Dealer Showings this Month!

THESE ARE THE PROBLEMS most frequently voiced today by appliance dealers. They're problems that become more critical as the retail appliance market gets more competitive. And they are problems that Kelvinator's marketing strategy is designed to solve in 1954!

Yes, the Kelvinator story for 1954 is *different*... built around a franchise the dealer can *count on* to yield a FAIR RETURN on his investment of time and capital.

It is, therefore, of immediate interest to any appliance retailer who is concerned about his progress, profit and permanency to contact his distributor or zone office and arrange to attend the Kelvinator Dealer Showing for 1954 in his area.

Kelvinator has acted!

Kelvinator — A Division of Nash-Kelvinator Corporation, Detroit 32, Michigan

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY!

REFRIGERATORS • RANGES • FREEZERS • WASHERS • DRYERS • IRONERS • WATER HEATERS • DEHUMIDIFIERS
KITCHEN CABINETS • SINKS • "ELECTRO-DRAIN" GARBAGE DISPOSERS • ROOM AIR CONDITIONERS

Complete APPLIANCE WIRING SYSTEMS

CUSTOM ENGINEERED TO REDUCE YOUR ASSEMBLY COST

Streamline production with Riverside wiring harnesses! These neat "packaged units," engineered for accurate, easy installation by unskilled assemblers, make possible the efficient hookup of a single unit installation to your product. We design and manufacture them in any required arrangement, including necessary terminals, relays, limit switches, push-button stations, circuit breakers, junction blocks, etc. Engineering and Experimental departments at your service, without obligation. Call us or send details of your problem for prompt design recommendations and a firm quotation.

RIVERSIDE MANUFACTURING AND ELECTRICAL SUPPLY COMPANY
10233 Michigan Ave., Dearborn, Mich., Tiffany 6-6800
WIRING HARNESSES AND ASSEMBLIES • CORD SETS • HEATER AND EXTENSION CORDS • SWITCHES • MOLDED RUBBER PRODUCTS

TYPHOON
OFFERS DEALERS MOST
Profitable Set-up
IN
AIR CONDITIONING

Air Conditioning Units—1½-20 tons
Multi-Packaged Systems—Up to 60 tons
Prop-R-Temp Heat Pumps—2-20 tons
Evaporative Condensers
Packaged Water Chillers
TYPHOON AIR CONDITIONING CO. INC.
794 Union Street, Brooklyn 15, N. Y.

NARDA and Union--

(Concluded from Page 1, Column 3)

discouraged and he quits selling.

"We recognize, of course, the importance of marginal benefits to labor in addition to substantial wages and steady employment. Further, we realize that it is as important to any agency concerned with the financial welfare of a group to help the members of that group derive maximum benefit from its earnings. But we urge you to seek those benefits which do not result in laying the groundwork for what could be an eventual log jam that hurts us all."

NARDA President Johnston concluded his appeal, "It is our hope that, through joint effort, we can bolster sales and maintain a high level of employment throughout our civilian industries to the end that, by mutual respect of the various elements of production and distribution for the part that others play in the over-all economic scheme of things, the American standard of living remain as high and stable as is possible."

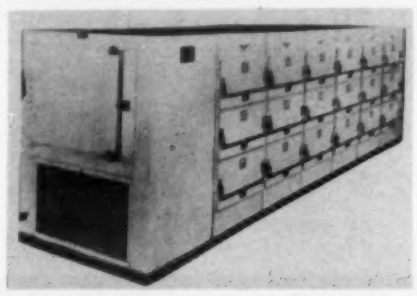
Freezer Sales--

(Concluded from Page 1, Column 2)

686,822 units. In the same period of last year, sales totaled 618,267.

In September, 25 companies sold 58,140 freezers, compared with 59,497 in the previous month and 83,942 in September of 1952.

Of the September total, 42,891 were chest-type models and 15,249 were uprights. Freezers in the 12.5 to 17.4-cu. ft. category continued to dominate sales. (See table on page 19.)



LOCKER UNIT by Blast Freeze Co.

Blast Freeze--

(Concluded from Page 1, Column 4)

units will be placed in production first, with deliveries to distributors starting in February, the Blast Freeze Co. management declares.

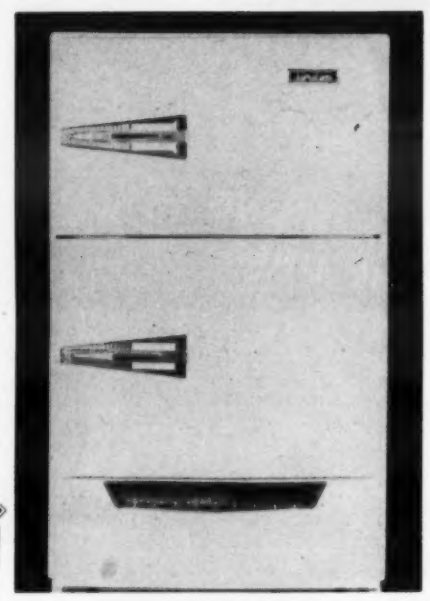
The basic components of this system are the refrigeration unit section, drawer section (three tiers high), and an end sealing panel. The complete unit is a combination of the required sections to fit the application, thus providing flexibility in the application.

Cooling is by means of forced draft circulation from the refrigeration section. It is said that because of the wiping action of the circulated air, no frost forms on any interior surface.

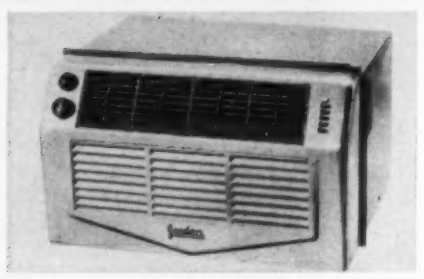
Each drawer provides 6-cu. ft. net capacity and has an individual tumbler-type lock.

These "warm room" refrigerated locker plants have had applications in hospitals and institutions, in apartment houses, in food markets as locker plants or for reserve food storage, and as a packaged freezing plant.

JORDON'S new dual temperature refrigerator.



UPRIGHT freezer by Jordon.



NEW window air conditioner joins Jordon line for 1954.

Jordon Line--

(Concluded from Page 1, Column 4)

8 cu. ft. of normal temperature space. It is 71½ in. high, 41 in. wide, and 30¾ in. deep.

The freezer section has an embossed, no-seam aluminum interior with two freeze-plate shelves, freezer coils in the ceiling and floor, and a special door shelf for juice concentrates.

REFRIGERATOR SECTION FEATURES

Among features of the refrigerator section are two crispers, a butter keeper and a special egg shelf in the door, wire shelves in the box, and decorative molding along the front. This section includes an automatic defroster, with moist side walls which allow food to be stored without covering, and an aluminum interior, the company said.

A dry storage bin is at the bottom. The finish is white "hi-baked" enamel and insulation is "extreme densed microlite."

One unit provides power for both segments, but there are two separate controls, "an innovation in dual-temperature appliances," according to the company.

5 YEARS OF EXPERIMENTATION

The appliance is the result of five years of continual experimentation, Frank Fogel, president, said.

Harry Fogel, executive vice president of Jordon, explained that the thinking behind the dual-temperature appliance is to meet the growing demand of American families for frozen foods and the continuing need for normal temperature refrigeration.

"Each month the American housewife uses more and more frozen foods," he said. "She is finding it impractical to run down to the basement several times a day. The combination allows the housewife the convenience of a freezer on the lower part of the upright box and a refrigerator at normal height."

Another new Jordon appliance is a small-sized upright home food freezer, the "Little Lady" (model J-12), designed for small homes or apartments. Priced at $499.50, this freezer can hold over 400 lbs. of frozen foods and is lined with smudge-resistant aluminum finish.

It has three freezer plate shelves with coils in the ceiling and walls and with high density insulation all around, including the full-length door. A rubber gasket around the door is said to insure a perfect seal, and all hardware is heavy chrome plated.

The cabinet is made of heavy gauge steel, is a one-piece wrap-around, and is welded for extra strength. Exterior dimensions are 60 in. high, 28 in. wide, and 28¼ in. deep.

AIR CONDITIONERS

The air conditioners are flush-type, extending less than 3 in. into the room beyond the window sill. Cabinets are of metal and in solid colors. Thermostatic control can be provided at additional cost.

The six-position pushbutton controls (off, ventilation, cooling low, cooling high, exhaust, and exhaust cool) are emphasized as a main feature of the new line.

Dimensions and cooling capacities of the models are given in the accompanying table.

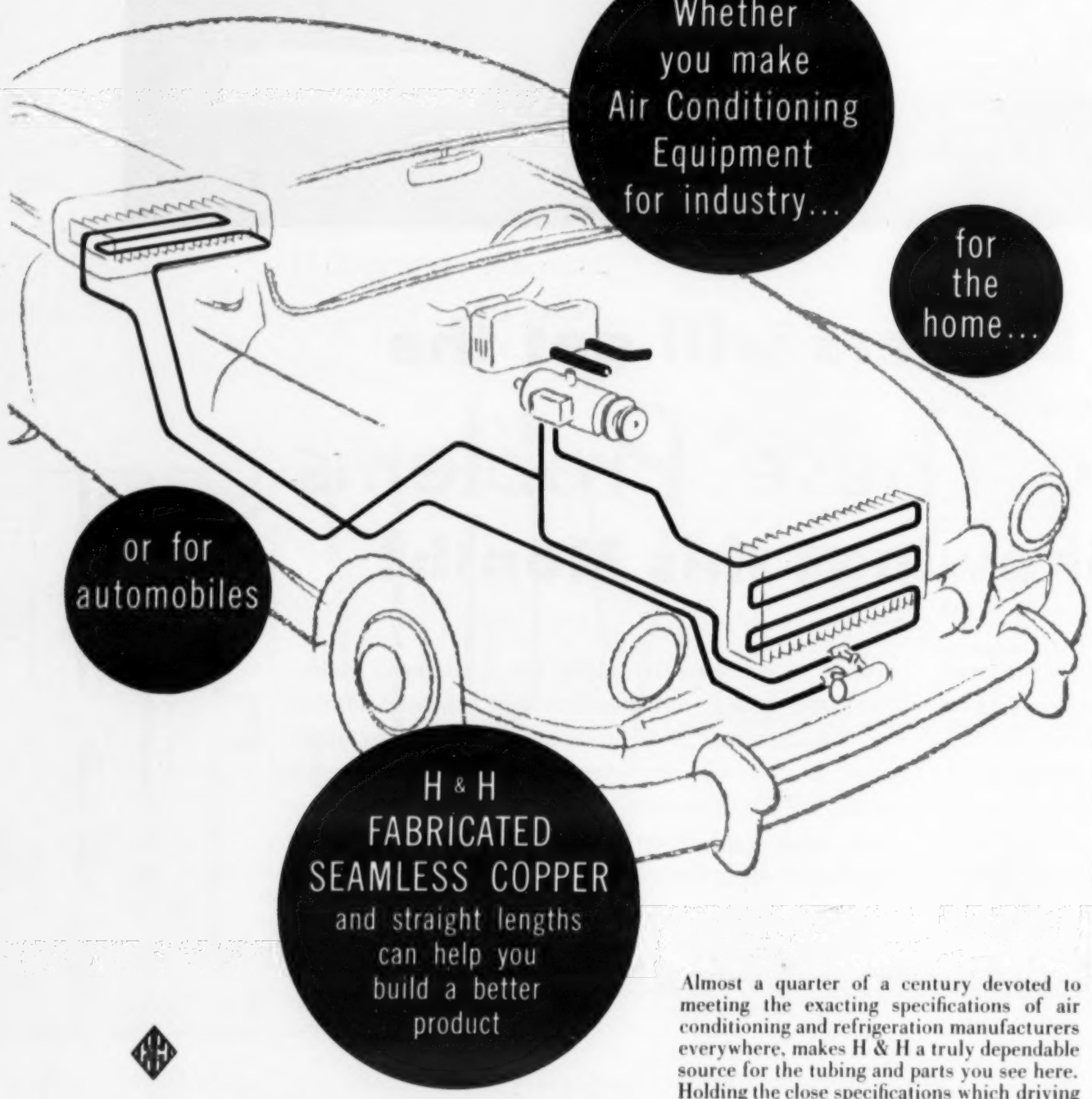
A knob controls damper and exhaust. Dehumidication is 2.5 pints an hour.

Improvements in the Gold-Tone line of Jordon upright freezers include an interior light, all gold anodyzed and embossed aluminum interior with no seams, juice shelves in the door to allow for more interior storage space, and a dry storage bin.

New Jordon Room Air Conditioner Dimensions, Capacities

	J-50 (½ hp.)	J-75 (¾ hp.)	J-100 (1 hp.)
Width	26 7/16 in.	26 7/16 in.	26 7/16 in.
Height	15 19/32 in.	15 19/32 in.	15 19/32 in.
Depth	22 in.	22 in.	25 in.
Cooling Cap. B.t.u.	6,200	9,000	11,200

(Based on standard ASRE cond. Operate in room temperature 80°. 67 wet bulb outside. Moisture in air. Outside temp. 95°. Dry bulb 75 wet bulb.)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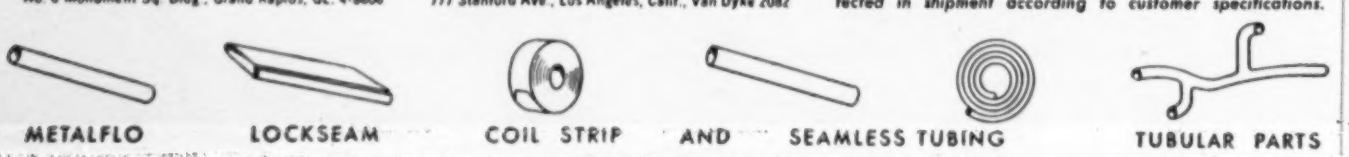

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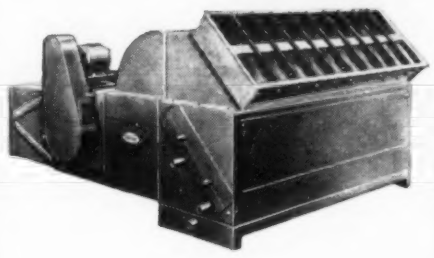
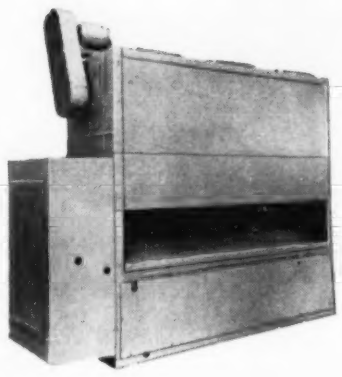
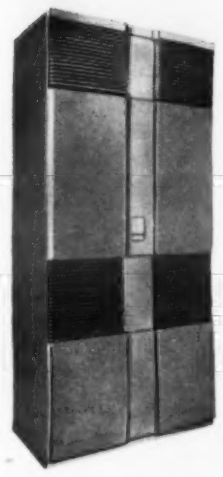
Carrier offers you the most complete line of air conditioning and refrigeration equipment in the industry



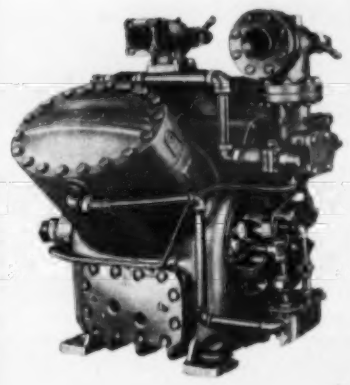
ZONING WEATHERMAKERS—Fan-coil unit for zoned air conditioning systems that use remote sources of refrigeration and heat. Provides year-round air conditioning with individual room control. Available in five sizes, up to 90 tons.



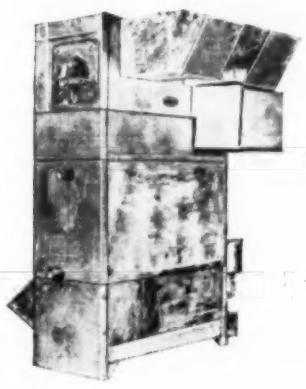
COMMERCIAL WEATHERMAKERS—Compact self-contained unit for comfort and industrial applications with duct distribution. Basic assembly includes fan, cooling coil, refrigerating sections. Optional accessories can be added. 20 hp capacity.



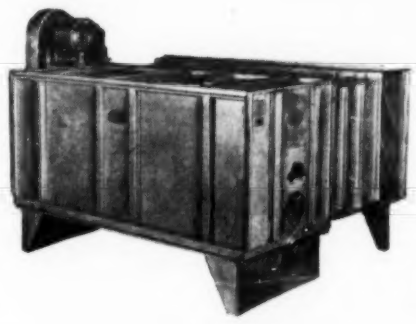
SELF-CONTAINED WEATHERMAKERS—Complete packaged unit for air conditioning stores, shops, offices, laboratories. Used in the space or remote location, with or without duct distribution. Available in six sizes from 2 to 15 hp.



75 TO 200 HP RECIPROCATING COMPRESSORS—For large commercial and industrial applications like freezing and processing. For industrial and comfort air conditioning. Heavy-duty V and W types, single-acting, enclosed. Direct, gear or belt driven.

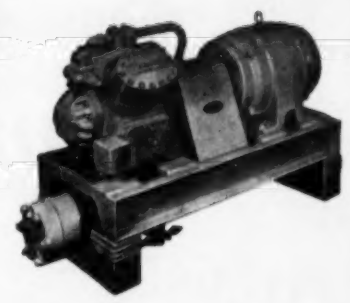


EVAPORATIVE CONDENSERS—For heat disposal where water supply and drainage are problems, this fan-coil type refrigerant condenser takes the place of water-cooled condensers and cooling towers. Capacities up to 90 tons.

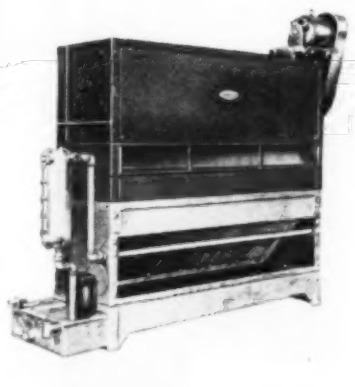


SYSTEM WEATHERMAKERS—Fan-coil type air conditioner for central cooling and heating systems using remote refrigeration and heat. Seven basic fan and coil section sizes used with any one of four cooling coil capacities make 28 different sizes.

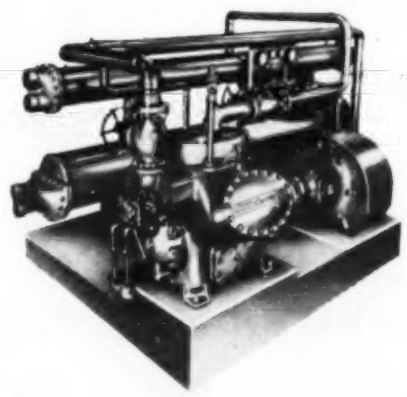
DUCT-TYPE WEATHERMASTERS*—Low-pressure air distribution room units—ideal for hospitals, hotels, office buildings, apartment buildings, laboratories, banks and schools that have a remote source of refrigeration and heat.



2 TO 125 HP FREON REFRIGERATING COMPRESSORS AND CONDENSERS—Heavy-duty reciprocating type for air conditioning and refrigeration applications. Uses Freon-12, Freon-22 or Carrene 7. Direct or belt driven. Used with water-cooled or evaporative condensers.



INDUSTRIAL WEATHERMAKERS—Single unit spray-coil air conditioner for central cooling and heating systems using remote sources of refrigeration and heat. Cools, dehumidifies, heats, humidifies, filters and circulates air. Five sizes, up to 90 tons.



75, 100 AND 150 HP REFRIGERATING MACHINES—Complete reciprocating systems for cooling water or brines for air conditioning and industrial process applications. Driven by electric motor, gas or Diesel engine, or steam turbine.

Carrier

Air Conditioning Refrigeration

Industrial Heating

For further information about this complete line of air conditioning and refrigeration equipment, call your nearest Carrier representative. Or write: Carrier Corporation, Syracuse, New York.

*Reg. U.S. Pat. Off.

FOUNDERS AND OFFICERS of the new New England trade association are: (rear: l. to r.)—Anthony Erbetta, Boston Air Conditioning; Jesse Rivers, Commercial Refrigeration, second vice-chairman; Charles Harris, Harris Refrigeration, Director. (Front: l. to r.)—Harry Schiller, H. G. Schiller & Co.; Jerry Handspicker of Miller & Seddon Co., Inc., chairman; Malcolm Moller, Boston Filter Co.

New England Contractors Form Trade Association; Handspicker Chairman

CAMBRIDGE, Mass.—A new organization that tentatively will be called the New England Air Conditioning & Refrigeration Contractors Trade Association has been formed, it was announced here.

The group recently held its first annual meeting and elected officers for the ensuing year. M. P. (Jerry) Handspicker of Miller & Seddon Co., Inc., was chosen chairman.

Handspicker pointed out that New England has long known the need for a contractor association and that numerous meetings were held to discuss formation of such a group.

Any contractor in the area who is interested in joining the association is invited to contact the chairman.

Johnson Directs Unarco Production, Engineering

CHICAGO—Emil T. Johnson has been appointed director of production and engineering for Union Asbestos & Rubber Co. of Chicago, it was announced recently by Norman C. Naylor, president.

For the past year, Johnson has served as head of production and engineering of Unarco's fibrous products division. Prior to joining Unarco seven years ago, Johnson had been factory manager at the Aviation Corp.'s factory at Williamsport, Pa.

His new duties will entail the general supervision of all production and engineering for Unarco, Naylor said, including the recently acquired heating and air conditioning facilities at the Greenville, Ill., plant.

In his new position he automatically becomes a member of the company's operating committee.

Detroit City-County Bldg. System To Be Described

DETROIT—Under the subject of "Air Conditioning the City-County Building," J. W. Kreuttner, vice president of Buensod-Stacey, Inc., will describe the system being installed for Detroit's new combination City Hall and County Bldg. before a joint meeting of the Detroit ASRE section and the Michigan ASHVE chapter at 8 p.m. Monday, Dec. 14 at the Engineering Society of Detroit.

Major portion of the talk will be devoted to the "Dual Duct" system of air conditioning which is employed in the building.

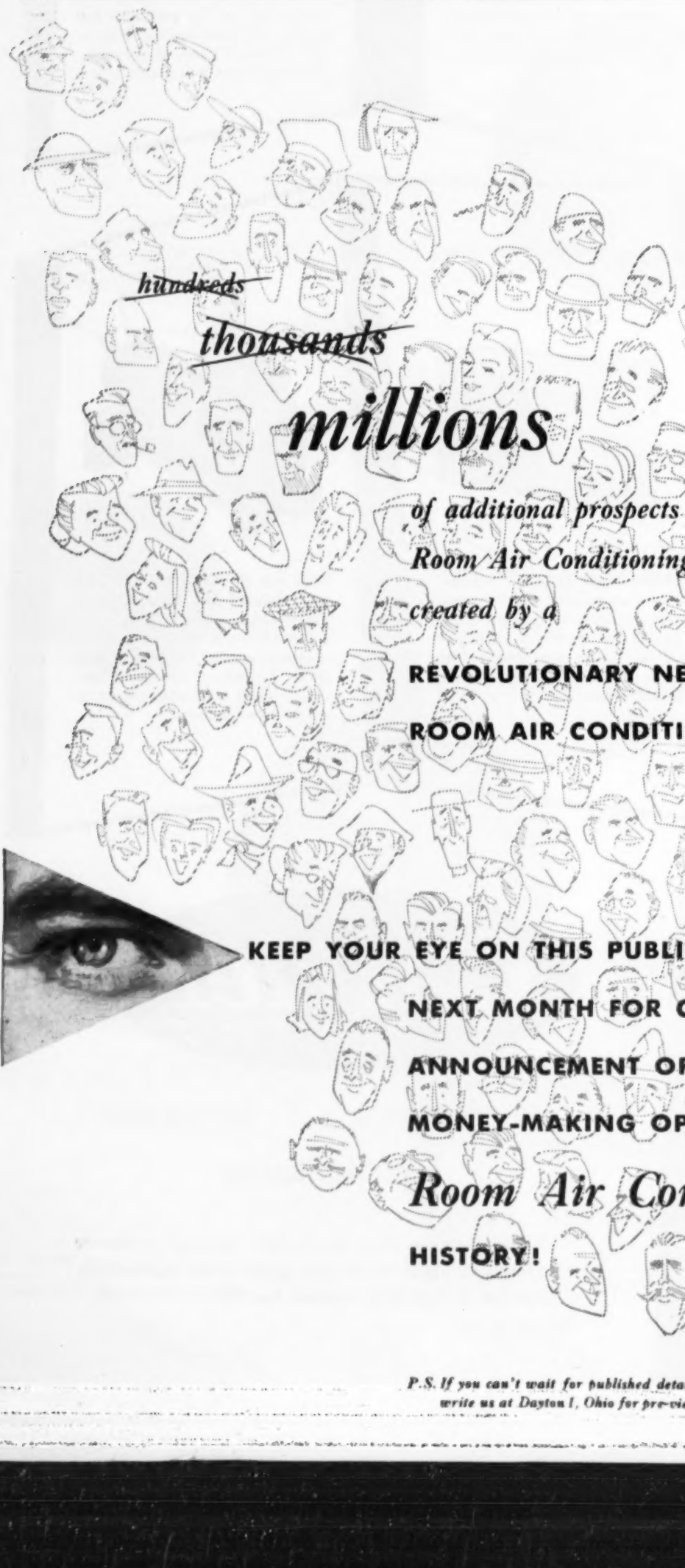
'Big Store with Little Door' Has Only 7½-Ft. Frontage

ROCHESTER, N. Y. — Unique in appearance and layout among the stores of the new Northgate Plaza is Northgate Appliances, with a 7½-ft. frontage, but 5,000 sq. ft. of floor space.

The store, pie-shaped in design, "the big store with the little door," will carry complete lines of television and radio and electrical appliances. There also will be an extensive self-service record department.

Owner Jack Stanton emphasizes, that Northgate Appliances will offer a complete appliance repair and service department. Part of the store's promotional plans, he says, call for broadcast of a radio program of interest to women at 1:30 p.m. daily over Station WBBF.

Stanton was associated for seven years with both the wholesale and retail appliance business in Rochester.



P.S. If you can't wait for published details, write us at Dayton 1, Ohio for pre-view.

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

"There aren't enough good salesmen at work for us," he insisted.

Most sales managers are troubled today by the same problem. A great many admit that their crews are top-heavy with young men who never learned how to get the Tough Order. However, hard-working salesmen are difficult to find. This is true despite the fact that good salesmen earn the biggest money.

"I can't remember a case where a salesman looking for another job complained about money," comments a vice president in charge of sales.

Not only is it tough to find good salesmen. It is a rougher task to hold them.

Fen K. Doscher, vice president in charge of sales for Lily-Tulip Cup Corp., describes the situation:

"There has been quite a change in mental attitude since the 1930's. In those days, men were hoping to get that job and were looking forward to a long career with the company. Nowadays the applicant doesn't say so, but it is you, the employer, who is on trial. He knows that there's a shortage of good men; he has another offer in his back pocket. Actually, he's thinking, 'I'll try this company out for a while; if I don't like it, I know another place I can go.'"

Harry R. Tosdal, professor of business administration at Harvard, sheds additional light on this sorry situation:

"The fact is, selling is not highly regarded by college men. The kind of man we want in this business is the kind of young man who would do as well in one field as in another. But the smartest men are staying out of selling today because it has the reputation of not being so good an occupation as others."

Tosdal observes that men in their twenties and thirties prefer administration, production, or some job they feel is more "real."

Older men in the selling profession, it seems, may last a lot longer than they think. Competition for their jobs is decreasing.

Eisenhower Inherits a Bad Job

Never before in "peacetime" has the state of international affairs been so important an influence upon American business.

This is true because the expenditures of our Federal Government for military purposes have become the most important element in our economy.

The rate of defense expenditures will be determined by the prospects of war or peace, or rearmament or disarmament, of mounting or relaxing international tensions.

The rate of private expenditure by American businesses and consumers currently is dominated by the state of international affairs.—NEIL H. JACOBY, Dean of the College of Business Administration, University of California.

Add Human Interest

Barney Oldfield was famous as a daredevil motorcyclist long before the world had heard of Henry Ford.

The latter induced Oldfield to drive a Ford "gas buggy" in his first auto speed contest. (Henry had raced his "999" successfully and happily; but figured Barney could do a better job).

It was a good team. Ford's mechanical genius and Barney's reckless driving combined to put Ford on his way to becoming the richest American.

"Hank," Oldfield wiseacred Ford many years later, "I made you, and you made me. From the looks of things I did the better job."

Octogenarian racing fans tell scads of stories about Oldfield. Sample:

"What's going wrong here in the pit?" Barney demanded on a tire-change stop during a 10-mile contest. "They're too slow."

"Your crew for some reason hasn't any espirit de corps," his manager explained.

"Then you go get some," Barney thundered. "Try Harry Stutz. He told me I could borrow anything he had if I got inna jam."

Believe it or not, Henry Ford didn't defend his speed championship one year because he ran out of money. He'd driven his "999" to Florida for the test. Lived in a tent, and ate out of cans. In a warm-up he broke an axle. Couldn't afford a replacement. Had to borrow money to come home.

A year later, though, he *could* afford to hire Oldfield.

After that experience Henry dropped out of racing, and stuck to manufacturing.

Perk Up, Man!

He ran for the legislature of Illinois and was badly swamped.

He next entered business, failed, and spent 17 years of his life paying up the debts of a worthless partner.

He fell in love with a beautiful woman to whom he became engaged. She died.

Entering politics he ran for Congress and was badly defeated.

He then tried to make the United States Senate and lost.

He became a candidate for the vice presidency of the U. S., and again was defeated.

He missed on a second try for the U. S. Senate.

But in the face of all this defeat and failure, he eventually achieved the highest success attainable in life, and undying fame to the end of time.

His name was ABRAHAM LINCOLN.

1 YEAR • 5 YEARS
10 YEARS
LOOK AHEAD
—and you'll buy VICTOR today!
• Model VUQ-18-A (No Inner Doors)
• 19 cu. ft. Upright (Also available with inner doors)
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• Many exclusive selling features
Guaranteed by Good Housekeeping
...Send for details of this Victor Upright Quickfreezer and other items in the Victor line that mean More Sales ...More Profitable Sales for You
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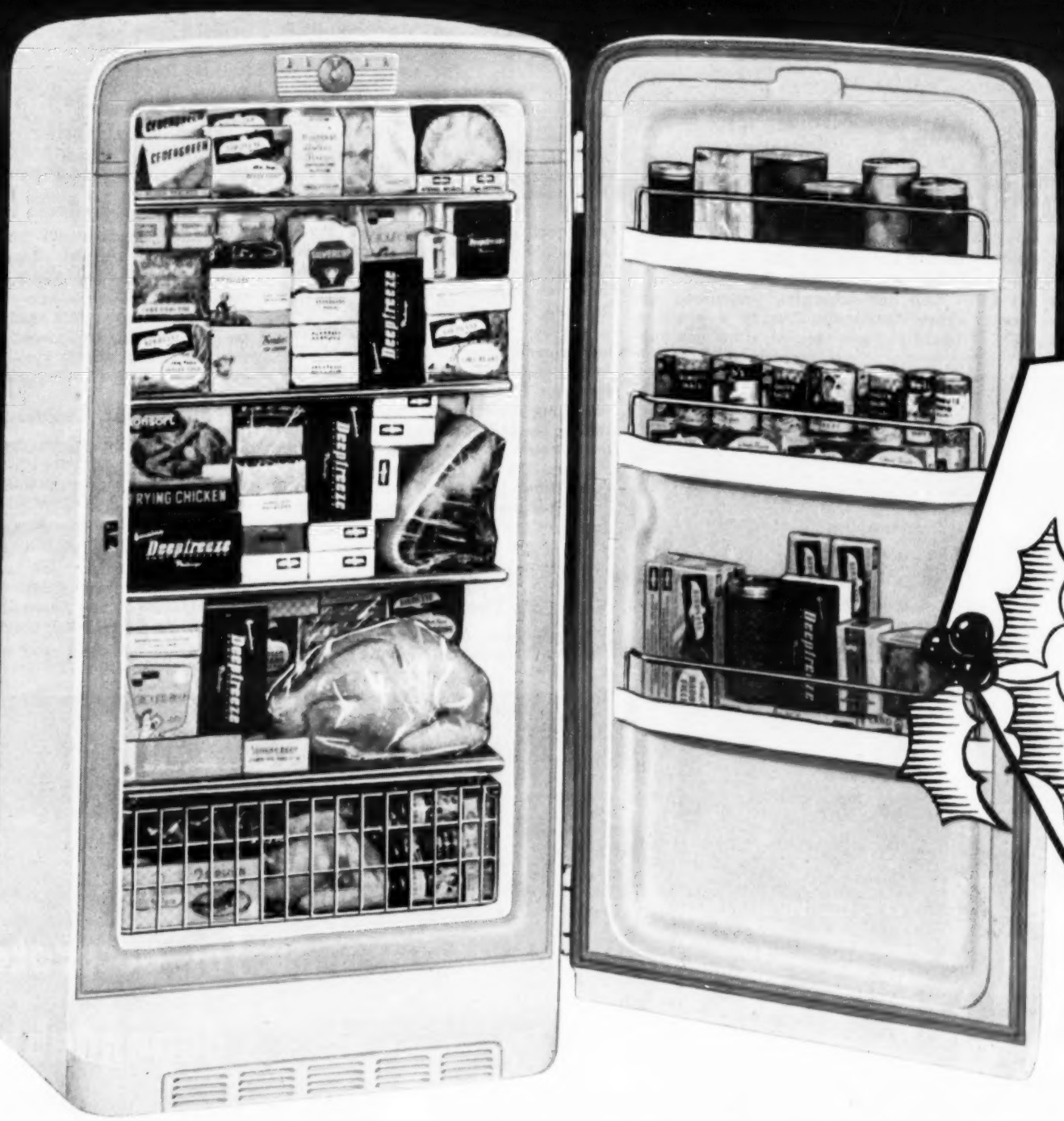
HOT CHRISTMAS PROMOTION ON THE SENSATIONAL NEW UPRIGHT DEEPFREEZE HOME FREEZER



Newest addition to the world's most complete line of home freezers!

Model CU-115—capacity 12 cu. ft.
HOLDS MORE THAN 420 LBS. OF ASSORTED FROZEN FOODS!

ONLY DEEPFREEZE GIVES YOU:

★ The "Freezer-Shelf Door"! ★ The "Freezer Basket"! ★ Color Styling! ★ Modern Kitchen Design! ★ Super-Quiet Operation! ★ The Name and the Freezer that are easiest to sell!

Chest-Type Deepfreeze Home Freezers

have revolutionized homemaking for thousands of women. They are the *pioneer* home freezers, and are far ahead of the field in every way because of the incomparable experience behind them. The Deepfreeze Home Freezer line is now, as always, the world's most complete. The new deluxe upright model has all the qualities of the famous chest-type models, which are made in 7, 13, 17 and 23 cu. ft. capacities.

Deepfreeze "packaged" promotions have gone over big with dealers all over the U.S.A.—but this new Christmas promotion tops 'em all for news value and appeal!

The newspaper ad, banner and radio spots are for your own *local* campaign. The beautiful back cover of American Magazine, and the Gabriel Heatter program coast-to-coast, give you a powerful *national* campaign to tie in with!

Product-wise and promotion-wise, Deepfreeze is the hottest name in the appliance business today. If you're a Deepfreeze dealer, you *know* the effectiveness of Deepfreeze promotions. If you're not, see your Deepfreeze Distributor today!

COMPLETE PACKAGE PROMOTION!

★ 4-Color Ad in American Magazine!
December issue—back cover, featuring this new model!

★ Tie-in Newspaper Ads for Dealers!
Hard-hitting 600-line ads are ready for you to run!

★ Radio "Spot" Announcements!
Run them on your local station with your signature!

★ Gabriel Heatter Coast-to-Coast!
530 Mutual stations every Thursday, 7:30-7:45 E.S.T.!

★ Colorful Window Banner!
Large 59" x 20" 3-color banner!

Deepfreeze® Home Appliances

Remember, only genuine Deepfreeze Home Freezers, Refrigerators, Electric Ranges and Water Heaters may bear our registered trade name "Deepfreeze." They are made only by Deepfreeze Home Appliances, North Chicago, Illinois. ©1953

AC-1253

Deepfreeze Home Appliances
North Chicago, Illinois

Yes, I am interested in Deepfreeze, the *specialist* in the home freezer and refrigeration field. Send me the whole story at once.

*Name*_____

*Address*_____

*City*_____ *Zone*___ *State*_____

CASE MEN REVEAL: *Current Thinking on Store Layout, Shelving Trends, Use of Color, Produce Location*

Commercial Refrigeration

CLEVELAND — How do distributors of equipment for food stores feel about such problems as charging for store layout service, current trends in shelving design and height, use of color in supermarkets, proper location of the produce department, etc.?

Thinking of leading distributors was revealed in an interesting panel discussion staged by the National Commercial Refrigerator Sales Association at its seventh annual convention here.

Under the chairmanship of I. W. Shell, retiring NCRSA president, members fired questions at the four-man panel made up of Sherman Bushnell of Refrigerating Engineering Co., Seattle; E. L. Hayes, Detroiter Refrigerator Mfg. Co., Detroit; Milton M. Katz, Ever-Ready Refrigeration Co., Trenton, N. J.; and George Schoenbacher, Red-E-Cold Refrigerator Co., Chicago.

Charging for Layout Service?

The first question was, "Do any or all of you have layout service, and what is the feeling about charging for it?"

Hayes: "We have it and spend a lot a time and money on layout service, but we never have charged for this service. We would appreciate any suggestions, however, on how we could charge for it."

The original questioner then went on to fill out the background: "We had three collect calls from the owner and then finally flew down to his place and spent four hours laying out a plan and determining prices. We were told we had hit a new high. Then the owner pulled out floor plans he had received from dealers coast to coast.

"They decided to buy our line and asked us to send detailed plans, which we did. Then they found they couldn't raise enough money to buy from us, so we asked them to return our plans. Later we found that they had used our plans but bought the equipment elsewhere. We've sent them a bill for $250 and are suing them. This may set a precedent."

Schoenbacher: "It appears to me it was first a matter of financing. Maybe his local bank would have helped. Perhaps if you had spent more time in arranging financing you would have obtained the order."

Said another distributor: "The layout department is a must, like bread in a bakery. Sometimes in making a layout we find we can use a piece of used equipment that we alone know about. I think by suing him you've done an irreparable amount of harm."

Bushnell: "We give nothing but a sketchy layout to the customer first. Then the customer has to pay 2½% for engineering and supervision, but we never give a customer a detailed layout before he signs the order. We need an engineer on our staff because of the strictness of codes in our area.

Katz: "If you think commercial refrigeration is bad, you haven't seen anything yet. We're in air conditioning, also. We're coming to the conclusion that we'll give only a rough sketch, not a detailed layout, until the order is signed for a store layout or an air conditioning installation."

Hayes: "We go into great detail in engineering, but you can let your engineer do so much work that he's doing work the salesman should be doing. We believe the merchandising end of the layout should be done by the salesman. Then the engineer makes detailed drawings."

"I think whenever you charge for something, it has more value; this will impress grocers," commented another distributor.

Harry A. Hattenbach said: "We don't charge for drawings. We train our salesmen to make store layouts. This way the salesman has more appreciation for the job and the effort he has already put into it. Then, he'll try harder to make the sale."

"All our salesmen," explained another distributor, "carry a drawing board in their car. We think the customer is more impressed when he sees a man making a drawing right in his store. We get a $100 retainer fee which applies on the purchase of equipment."

Said another: "We have made plans for all our competitors, but we get our share of the jobs. I don't think charging for plans will help get business."

At this point the distributor who had asked the question originally rose to say: "After listening to these discussions I've decided we can't charge for drawings. I admit I guess I was wrong."

Diagonal Layout

"What's being done with diagonal layouts today?" was the next question.

Shell: "It's still being done in some of the wider stores, but it's not sweeping the country."

Russell Maintain: "One expert said it adds interest to layout and permits better end displays and better merchandising. My own viewpoint is that the diagonal layout wastes space. My own principles of store layout are simplicity and maximum display. With diagonal layouts you get only 80% as much display as with grid layouts."

Hayes: "We've had considerable experience with diagonal layouts. In most buildings you do lose gondola footage. But try to picture a triangle standing vertically. The hypotenuse must be falling away from you as you enter a store with a diagonal layout. Then it increases end display and there you place the high profit merchandise. The first store we drew up we did wrong. Fortunately, we did not get the order, so a competitor put it in wrong."

Gondola Shelving

Next question: "What is the right height for gondola shelving?"

Maintain: "We're getting high and higher—60 in. to 84 in. If there is no space to go sideways then you have to go up."

Bushnell: "Out on the west coast the markets won't go higher than the point a man 6 ft. tall can see over."

"A & P has gone to a 60 in. back and 6 in. base with the top shelf 50 in. high," contributed another distributor.

"How important are adjustable shelves?" the panel was then asked.

Hayes: "I believe the real importance is to the man selling shelving."

Katz: "I think adjustable shelves are very important. Frankly, I don't see how you can sell shelves and gondolas that aren't adjustable."

Shell: "In addition to selling adjustable shelving you have to educate grocers as to its use. I personally do believe it has merit."

Others in the audience agreed that adjustable shelving will sell but that education of grocers is needed.

Installation Practices

Another question: "When a job is sold, who is put in charge of the installation—the salesman or a separate department?"

Schoenbacher: "We send the salesman in with the equipment to answer all questions about moving walls, etc."

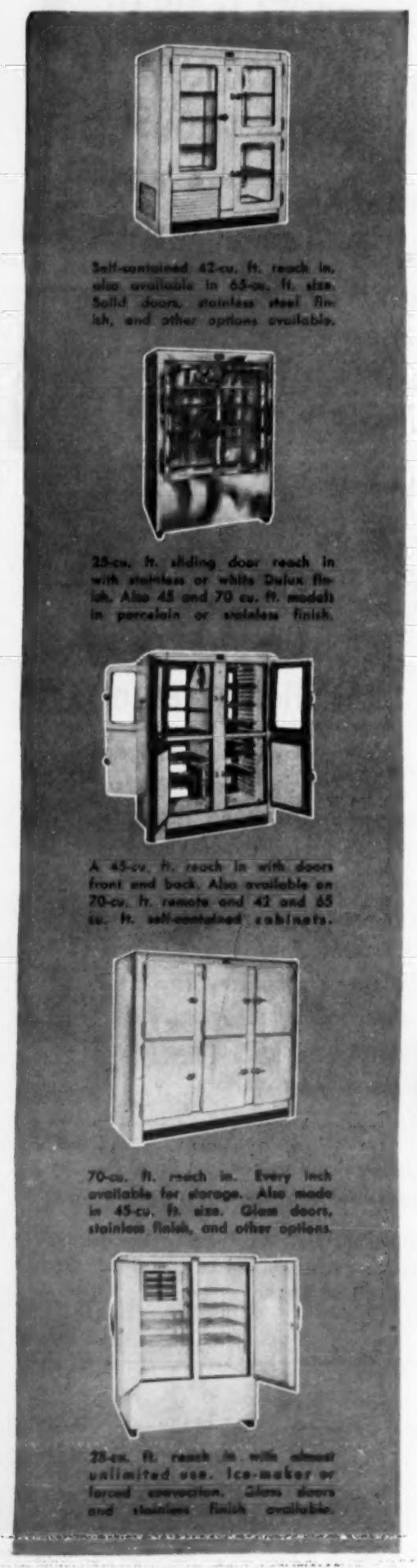
Produce Dept. Location

"What is the proper location for the produce department? We put it on the right at the entrance so the customer will buy produce first."

Katz: "Most of our jobs go in that way though I don't think it makes much difference."

"But how does produce look at the bottom of the basket when you get to the checkout?"

(Concluded on next page)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TWO RIVERS, WISCONSIN
World's largest exclusive manufacturer of time controls

NCRSA Panel--

(Concluded from preceding page)

Replied *Donald D. Denny:* "You can't put everything soft at the end of the store. Produce is a profitable item, and market operators want to sell profitable items before the shopper's money is gone."

Edward Hill (Hussmann representative): "I'm told the No. 1 problem in markets is labor. How far do you have to haul produce from the cooler to the case?"

"We've seen it everywnere," commented *Hattenbach.* "But if the man you're selling is a produce man, don't try to tell him to put the produce department last."

Art Biddle (of Hussmann): "I've seen it pay wherever it was installed."

Hard Goods

"Should food stores include general merchandise, or is the trend getting back to food items?"

Hayes: "Hard goods have crept into supermarkets, but I think you'll find some backing-off on the part of larger chains."

"Stores of 15,000 to 20,000 sq. ft. in the Southern California area are definitely increasing their non-food items," one NCRSA member said, "but they are correcting their initial mistake of going whole hog. Now they're limiting the non-food lines to fast-moving items."

Commented another distributor: "Some of these are very profitable lines—33% compared with 10% or 15% on food items. When we are financing a store we want the owner to make money so we will encourage these high-profit lines."

Color Trends

What about color?

Hayes: "This trend of color, murals, etc., in supermarkets started about five or six years ago. We at Detroiter got into it early. All of these things are somewhat of a gimmick. A year ago, for example, we built a 14-ft. merry-go-round for a market. I think we've now hit the peak. In fact, we've gone so far off base we have distracted attention from the merchandise. I'm going to swing a little toward a subdued trend now."

Wooing the Architect

"What do you do when you find the architect has made an error?" someone asked the panel.

Varied opinions were offered, one suggesting that the distributor go to the architect instead of the grocer; another advised going straight to the grocer.

Said *Hayes:* "We get on the job before the architect does."

But what appeared to be the consensus of the group was voiced by one individual: "Under no circumstances should you embarrass the architect. Woo him like a diplomat."

The session ended with slides showing scenes in the stores and shops of some NCRSA members.

Penn Controls Names Few Chief Engineer, Will Head Research

GOSHEN, Ind.—William Few has been appointed chief engineer at Penn Controls, Inc. here, it has been been announced by Ralph S. Penn, the firm's executive vice president.

William Few

In his new job, Few will be responsible for Penn's expanded research and product development program.

Few comes to Penn from the Clark Controller Co. of Cleveland where he was manager of the electronic and allied products division.

The new chief was born in Durham, N. C. and graduated from Duke university with a B.S. degree in electrical engineering. Few began his career with General Electric when he was selected for their two-year student engineering training course at Schenectady, N. Y. Upon completion of this course he was transferred to the specialty transformer division at Fort Wayne, Ind.

In 1940 he joined the Clark Controller Co.

Pharmacy Ad Emphasizes Refrigerated Biologicals As Safeguard to Health

BINGHAMTON, N. Y. — How refrigeration guards the health of the public in the modern pharmacy was emphasized by Hamlin's drugstore in an unusual newspaper advertisement built around the theme: "A Heartwarming Thing About This Cold Room Door."

Art work in the ad depicted a long line of drug bottles marching into a refrigerated room.

Copy read: "It's the door you'll never see. But isn't it heartwarming to know that behind this heavy, insulated door is a spacious room fully stocked with penicillin, blood plasma, insulin, vaccine, serums, cultures, liver extracts, and other biological products that must always be maintained at cold, constant temperatures to insure their freshness and potency.

"It's good news to know this; and to know, too, that any drug your doctor may order is always available from the most complete stock of drugs and biologicals in the Southern Tier—right at every Hamlin's drugstore. Always remember you pay no premium for your confidence in a Hamlin's drugstore or in a Hamlin's prescription."

30 Years of Making Ice Cream Cabinets

COMPARING THE FIRST Frigidaire ice cream cabinet with the latest self-service 1953 production model is P. W. Budworth (left), manager of Frigidaire's ice cream cabinet sales, and W. F. Switzer, manager of commercial refrigeration and air conditioning sales. The company is celebrating its 30th year in the ice cream cabinet business.

Worthington Occupies New Decatur Plant, Plans Production of Air Conditioning Units In January

DECATOR, Ala. — Worthington Corp on Nov. 20 took "beneficial occupancy" of its new plant here for the manufacture of air conditioning equipment, following an inspection tour by Hobart C. Ramsey, Worthington's president.

The Decatur Works — Worthington's 14th in the United States—will produce packaged air conditioning units for commercial and year-round residential use.

The new plant was built in record time. Ground was broken in June and the first carload of equipment is expected in January.

As part of Worthington's program for development in the air conditioning field, Ramsey announced that the company's Holyoke, Mass. plant is retooling to make it possible to step up production of the compressor elements for Decatur-produced packaged air conditioning units.

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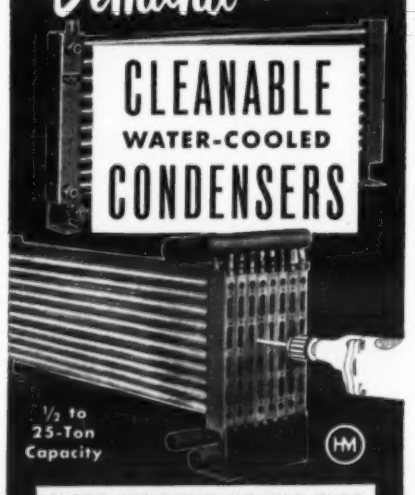

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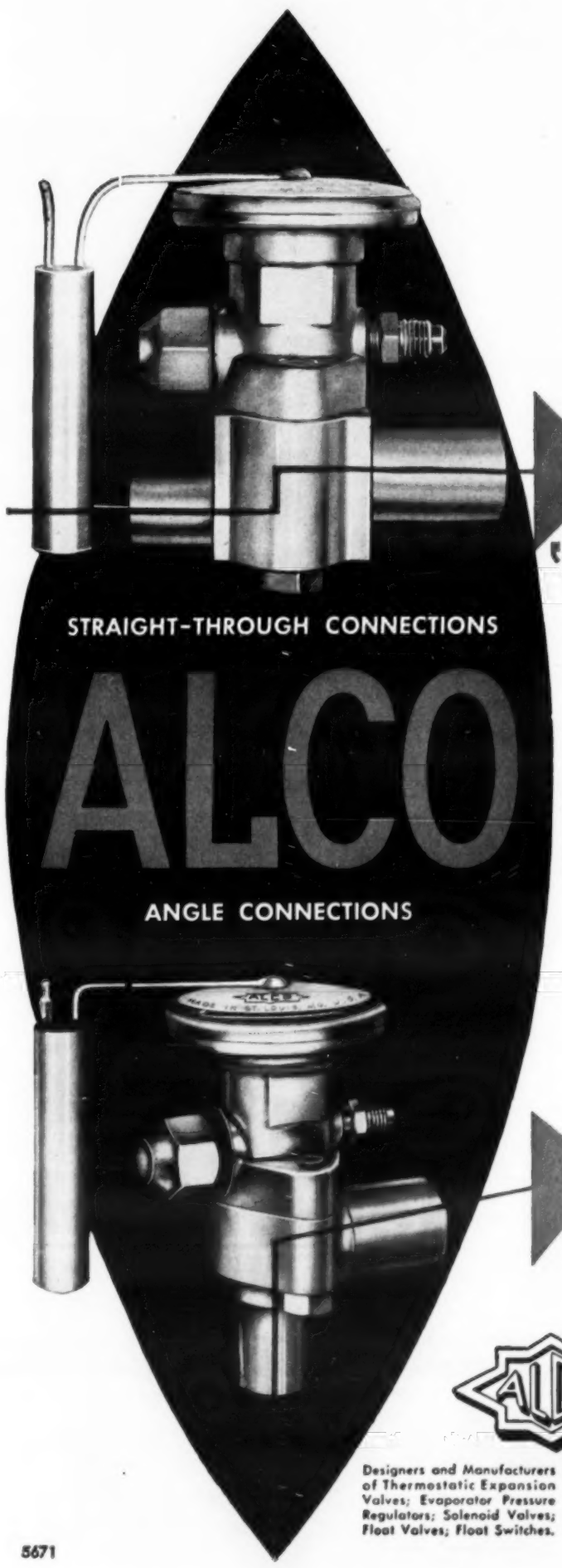

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HOUSEHOLD REFRIGERATION

FIRST REFRIGERATOR OFF the assembly line at the new Westinghouse appliance plant in Columbus, Ohio, is crated at the end of the line. George Meilinger, manager of the refrigeration department (right), and E. L. Smith, works manager of the new plant, look on.

Westinghouse Plans for Sales Increase as New Columbus Plant Begins Production

NEW YORK CITY — Reporting that the total appliance business of Westinghouse Electric Corp. for 1953 was running 30% ahead of 1952, John H. Ashbaugh, vice president in charge of the Electric Appliance Div., told a press conference recently that the company's goal for next year is a 10 to 15% increase in division sales over this year.

"I sincerely believe that sales of electric appliances in 1954 will be considerably higher than sales of 1953, which has been a very good year for Westinghouse and for others," Ashbaugh said.

"Products that make living easier in today's homes are going to be in greater demand in 1954 than ever before. The entire industry should do better."

He noted that the company's appliance business is now running four times the peak pre-war year of 1941.

Production capacity has been one of the problems in the Westinghouse appliance operation, according to Ashbaugh. He said production has been at capacity this year and would continue so probably well into the first quarter of next year.

Commenting on the division's expansion with the addition of a $45 million major appliance plant in Columbus, Ohio, and purchases of over $4 million worth of new equipment for the division's plant in Springfield, Mass., Ashbaugh stated:

"By the end of 1954, we expect to have our new Columbus plant in full operation, including the manufacture of compressors now produced in our Springfield plant.

"When the refrigeration production is moved from our Mansfield plant, we will then have room to expand our other lines of major and portable appliances. We have been short of those products for a long time. We hope to also better cover the market by making additions to our present lines.

"At the same time, we will utilize the space in Springfield now occupied by compressor production to expand our production there of motored appliances."

NO NEW DEALERS TO BE ADDED

Ashbaugh said the company has no plans at present to increase the number of its dealers, although this organization is being constantly reviewed. He termed the present number of dealers "about right."

Discussing comparative markets, the Westinghouse executive said the eastern market has been running 30% ahead of 1953. The midwest district has continued strong, as has the southeast, he said, with the southwest and the coast off somewhat on gains.

Referring to distribution methods in the industry, Ashbaugh pointed out that Westinghouse has for years had a policy of shipping mixed carloadlots of appliances directly to dealers to save unloading and reloading at distribution points.

While dealer purchases are still made through a distributor, the dealer can buy a carload of different appliances and it can be made directly from the factory to a dealer or two dealers in the same town, he noted.

CARLOAD SHIPMENTS RISE

He said carload shipments direct from the Mansfield headquarters factory this year represent an increase of 35% over the number made last year "and undoubtedly indicate that we will see more of this in 1954."

In general, Ashbaugh predicted, appliance prices will not be lowered, although this may ultimately be accomplished through a combination of engineering and production improvements. At present, he said, the cost of labor is the principle deterrent to a general reduction of prices.

In order to sell increased production, manufacturers will have to depend on mass media and mass merchandising methods such as group demonstrations, according to Ashbaugh. The home economist is one of the key factors in this technique, he noted.

Regarding the growth potential of new appliances, Ashbaugh named the food waste disposer and the dishwasher as two of the most promising.

One of the surprises of the market, he said, has been the tremendous gain of "portable" appliances, particularly fans. Terming the fan business the fastest-growing in the appliance field, he reported that Westinghouse's 1954 fan orders were greater than for any year except 1953.

The refrigerator line includes an 8-cu. ft. model priced at $199.95, $40 under the lowest-priced similar-sized unit in the 1953 line. A new 9-cu. ft. refrigerator is tagged at $279.95, $20 less than this year's comparable model. The $199.95 price of a new 30-in. range is $40 cheaper than the least expensive 1953 model.

Refrigerators, Dishwashers Up In Phila.

PHILADELPHIA—A 27% gain in refrigerator sales and a 52% rise in dishwasher sales were the bright spots in the September sales picture for distributors in the Electric Association of Philadelphia.

Other than these gains, however, the picture painted by the association's figures was not so bright. Water heater sales were down 8%, ranges 21%, clothes dryers 26%, and freezers 49%. The distributors reporting sold 715 air conditioners during September, to run their nine months total to 25,508. No comparison was made with last year.

For the nine months, the association reported water heater sales up 21%, freezers up 5%, and ranges up 2% over last year. Refrigerator sales were at the same level as in the first nine months of 1952. Clothes dryer sales were off 17% and dishwasher sales 18%.

Comparative sales figures, covering sales in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, were as follows:

Electric Appliance	Sept. 1953	Sept. 1952	Total Jan. to Sept. 30, 1953	Total Jan. to Sept. 30, 1952
Air Conditioners	715	..	25,508	..
Dishwashers	447	293	3,338	4,028
Clothes Dryers	747	1,001	5,644	6,729
Home Freezers	739	1,428	10,124	9,611
Ranges	1,065	1,332	11,187	10,888
Refrigerators	6,298	4,937	57,444	57,160
Television	18,489	20,728	106,095	109,654
Water Heaters	827	898	7,632	6,305

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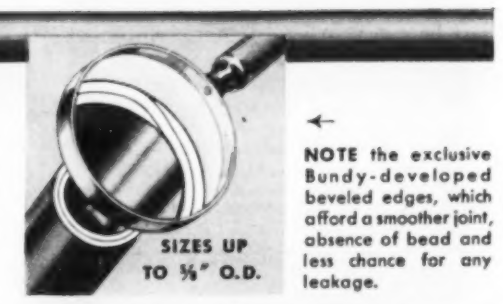

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Bundyweld nickel and Monel tubing are sold by distributors of nickel and nickel alloys in principal cities.

Busy Days for Servicemen

Because: *Of Breakdown In Factory Repair of Hermetic Systems*
Of Continuing Boom In Air Conditioning Sales Volume

CLEVELAND — "Tremendous opportunities" for field service organizations are opening up due to (1) the boom in air conditioning, and (2) the breakdown in the factory-repair method for hermetic systems, according to H. M. Kelso, service manager of Tecumseh Products Co.

Speaking before the 16th annual international convention of the Refrigeration Service Engineers Society here, Kelso revealed that factory service of hermetic systems is rapidly bogging down with the great increase in number of hermetics in use and the cumulative results of changing household refrigerator models every year.

Factory Service Means Burdensome Inventories

The latter has meant distributors now have extremely burdensome inventory of complete systems due to the numerous models that have been introduced through the years and the fact that only complete systems, not motor-compressor units, could be changed under the original factory policy, Kelso indicated.

It is quite possible that field replacement of the unit only, instead of the complete system, will be actively encouraged in the near future by manufacturers who up to now have opposed such field service, it was implied.

"All of you remember when hermetics were introduced 10 to 15 years ago," Kelso told the RSES convention. "In the early days the designs were fairly simple. Servicemen were worried that it would mean the end of field repairs.

Domestic Servicemen Turned To Commercial Work

"Those at the distributor level decided that anyone who could handle a screwdriver could replace a hermetic system. So the old domestic servicemen turned to commercial refrigeration work.

"Manufacturers, on the other hand, thought that the factory service would solve all problems. However, models of household refrigerators changed every year, and as more and more models developed, more replacement stocks were required. Distributors of one manufacturer, for example, now have to keep as many as 70 different replacement systems in inventory.

"It became apparent," Kelso declared, "that this would break down the system eventually. The first step was factory-operated repair stations, which provided a partial answer.

"The introduction of the home freezer after the war developed an entirely new trend. Most designs, with their wrap-around evaporators, etc., prevented replacement of the complete system. After a few years, manufacturers realized that they had to permit field replacement of components. Our—the manufacturers'—fears of field repairs of hermetics were proved wrong.

"Then we sought to see what could be done about domestic boxes, but most systems had been designed for only complete replacement. Some manufacturers have trained men to silver solder so the system can again be hermetically sealed in the field; other manufacturers are using special connectors to simplify replacement of the hermetic unit.

"All manufacturers," Kelso asserted, "are seeking some solution to the problem. They want to speed repair work and keep the distributor's inventory at a minimum.

Kelso also brought out the point that this new trend of field servicing will help the designer of domestic refrigerators. If he can design with the plan that only the components and not the complete system will be replaced in the event of trouble, "perhaps more simplified and less expensive designs" will result in the future, Kelso said.

"Servicemen will have to be carefully trained, however, for field work on hermetics and this will lead to upgrading.

"The problem of moisture must be considered. Service engineers as a rule use a lot of care to avoid moisture problems, but the problem is still there. In freezer and household cabinets the presence of moisture is always recognized by freeze-ups. In air conditioning systems, of course, freeze-ups don't occur because of the higher coil temperatures. However, the presence of moisture in air conditioning systems is just as detrimental as in the freezer or household box.

"Simplest way to handle moisture is to install a new drier," Kelso continued, "but if there is more moisture present than the drier can handle, the system has to be dried."

Questioned as to what should be done to a system after a motor burn-out occurs, Kelso explained: "Usually carbon, varnish, etc., from the motor doesn't go beyond the condenser, but these are almost impossible to clean so a new condenser should be installed. The compressor unit is worth only the scrap price so a new unit should be installed."

He added that the sludge, etc., formed by a burn-out "won't get up to the evaporator. It is necessary to dehydrate a system after a motor burn-out because the motor gets so hot it will drive moisture from the windings, etc., out into the system," he cautioned the group.

Suggests Classes In Silver Soldering

Declaring that "most manufacturers would prefer silver solder joints," Kelso commented, "they feel that the average serviceman can't make these joints properly. Perhaps there should be classes in silver soldering."

In answer to a question from the floor regarding how much flux to use in silver soldering, Kelso replied, "use as little flux as possible.

"Handling of refrigerant is also very important, particularly with respect to the refrigerant charge. The charge in capillary system is very critical; there can be as little as ½ oz. difference in various systems.

$4,000 Worth of Equipment Needed To Repair Hermetic Systems

Asked "how much shop equipment is needed for handling hermetic systems," Kelso indicated that this "depends on how far you want to go. Coils don't offer much of a problem, but compressors do. Perhaps the total cost of shop equipment will be around $4,000."

In summing up his discussion, Kelso emphasized that this new trend in hermetic servicing combined with "the millions of air conditioning products to be sold in the next few years," means "much greater business for servicemen.

"The auto industry alone now expects that in five to eight years 70% of all cars sold will be air conditioned. This offers a tremendous opportunity for field servicing for those firms prepared to handle it."

Breakdown of Hermetic Repair Policy Means Big Opportunity for Service Firms

When hermetics were first introduced, manufacturers decided the only way to control quality of service was to do it themselves at the factory. So the household refrigerator designs allowed the complete system to be removed from the cabinet for shipment to the factory.

BUT, as Hal Kelso, Tecumseh service manager, explains in the accompanying article, manufacturers have discovered they'll probably have to allow field replacement of the hermetic unit and repair of the system.

The reason? Manufacturers are rapidly becoming swamped because there are now many millions of household boxes with hermetic systems. And as models have changed through the years, distributors have had to increase their stocks of replacement *systems* to the point where they have far too much money and space tied up in inventory.

Probable solution: Permitting, yes, encouraging qualified independent shops to replace hermetic units in the field.

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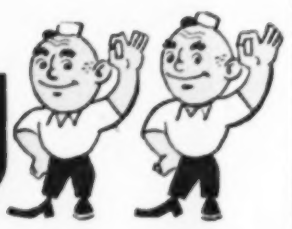

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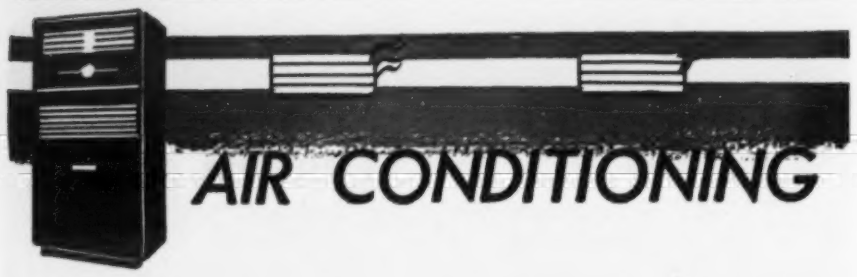
VELOCITY POWER TOOL COMPANY
201 North Braddock Avenue, Pittsburgh 8, Pa.



Contractor Converts Estimating Error Into Sales Plan After He Surveyed Wrong Church for Cooling Job

AKRON, Ohio—"We all make mistakes now and then," confessed Charles L. Schlegel, who operates the Hattenbach Co. here, commercial refrigeration and air conditioning dealership, "but this is the first time I ever heard of measuring up the wrong church for air conditioning."

Schlegel related that he had received call from a minister who was interested in having his church air conditioned. Schlegel took some information over the telephone and then made a 1 p.m. appointment.

Schlegel ran into some difficulty in finding the street the church was on and arrived at the site somewhat late for his appointment. He found that the church was a new building not yet completed. The minister was no where around.

So as not to waste time, Schlegel went ahead and made his survey. He found that the measurements given him over the telephone were correct, except that the ceiling was higher than it should be.

By the time he finished his survey, the minister had not appeared. So Schlegel took his figures back to the office and worked out a rough estimate.

He decided then that before going further, he had better check with the minister to see if it would be within his financial limits. He called the minister on the telephone and explained that as the minister had not shown up, he went ahead anyway.

"I was here from 1 to 3 o'clock," the minister declared. "You are the one that never showed up."

Schlegel was about to argue the point, when he recalled that it might not be wise to question a minister's veracity.

Then the minister saved him:

"Were you at the church at the bottom of the hill or at the top of the hill?" he asked.

"At the bottom of the hill," replied Schlegel. "It never occurred to me that there might be two churches on that street."

Both laughed and Schlegel went out again to correct his error.

"But I'm not going to let all that work go to waste," he vowed. "I'm going back and sell those other people air conditioning, too."

'Corner Grocery'

Now It Competes With Supermarkets' Cooling

GALVESTON, Texas — Despite economists' observations that the "corner grocery is disappearing from the American scene," Galveston grocer John H. Catching is confident that he and his market will be doing business here for quite a while—with an assist from air-cooled air conditioning.

In a recent letter to Climatic Engineering Co. of Galveston, owner Catching—whose store measures 25 ft. by 25 ft.—briefly summed up a problem facing little corner grocery market owners almost everywhere.

"The supermarkets here," he wrote, "have been air conditioned for a number of years. And way back in my mind, I've always felt that the little corner grocery owner would have to do something about it."

The introduction of air-cooled air conditioning in 1953 proved a boon to Catching's grocery career. Climatic Engineering installed a Chrysler Airtemp 3-hp. air-cooled "packaged" air conditioner on a raised platform at the rear of his store. Minor wiring changes and minimum of duct work were required. No merchandising space was consumed.

Catching's benefits? Within a week business volume showed a healthy increase. His 12-hour daily stint is done in comfort. Produce, candy and fruit stay fresher much longer, he reports.

Economically sound? The entire installation bill amounted to "under $1,700. Complete," wrote Catching.

First Look at New Home 'Precipitron'

FIRST LOOK at Westinghouse's new home "Precipitron" that can be installed in a home heating or cooling system without taking up any additional floor space is given to Robert Look (l.), president of the Detroit Warm Air Heating Contractors Association, by B. W. Henn, Westinghouse sales engineer from the Cleveland district office. T. H. Mabley, president of Temp-Matic Wholesalers, Inc., distributor in Michigan for Westinghouse air conditioning products, previewed the Precipitron for the warm air heating contractors, believing that it will be a logical, and now practical, product for them to sell. It is priced to sell for less than $400.

Auto Air Conditioning Is Here to Stay But—What About Air Distribution, Residual Odor?

DETROIT—Nearly 8,000 of Oldsmobile's 1953 cars were air conditioned, the American Society of Body Engineers learned from E. M. Estes, Oldsmobile body engineer, at its annual technical convention here.

"We feel car air conditioning is here to stay, although high cost and too much weight are problems for future design. We're working on these now," Estes said, in presenting a paper prepared by himself and A. D. Baker outlining the Oldsmobile-Frigidaire car cooling system.

'This system was described and illustrated in detail in the Dec. 29, 1952 and March 30, 1953 issues of AIR CONDITIONING & REFRIGERATION NEWS. Essentially, it consists of a rotary compressor driven off the engine crankshaft, a condenser ahead of the auto radiator, and an evaporator and blowers in the trunk.)

One feature of this system which drew considerable comment was the air distribution arrangement which includes transparent plastic connectors between the evaporator outlets below the package shelf, and the distributor ducts above the roof rails of the car.

"Appearance of the plastic connectors is not the ultimate," Estes admitted, emphasizing though that "we want good, draft-free air distribution, but as yet we don't see how to do this without ducts. We can see no advantage in supply grilles installed in the package shelf except lower cost."

"I don't want to let go unchallenged the statement that roof ducts are the only good means of air distribution," countered P. J. Kent, executive engineer of Chrysler Corp., commenting on Estes' paper.

"With air distribution from the center of the package shelf we can get a thin strata of air along the roof which filters down over the passengers," Kent asserted.

He also revealed that Chrysler will have a redesigned outlet grille for 1954 models.

In rebuttal, Estes declared, "Kent's second shelf grille may give as good air distribution as roof ducts, but the first design didn't."

Questioned as to "what can be done about cigar stink," Estes readily agreed "that's a real problem," and added:

"We had two test drivers each smoke five 'twofers' in an eight-hour day to compare the efficiency of filters in removing cigar odor. None of the filters took care of that load."

"Bringing in more outside air is probably the most practical way to help combat odor from smoke," Kent suggested, but Estes declared that "residual car smoke odor isn't helped much by increasing the fresh air supply."

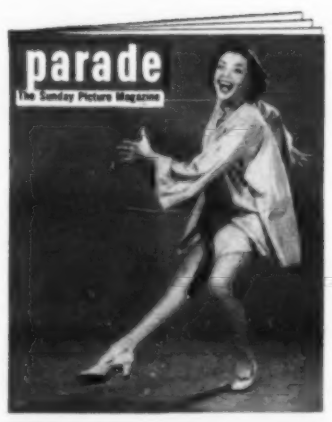
Ed. B. Mazzotta of Ford Motor also commented, "there are activated carbon filters that will absorb odors in the air, though I'm not sure of their effect on residual odors."

Another parade stopper

HORSEPLAY

to stop you before you turn the page

More than 10,400,000 readers stopped when they saw these buckin' broncos in PARADE, the Sunday Picture Magazine. It helps you understand why PARADE is a Sunday standby in the homes of people who live up and down every street in 43 key markets. These people have made PARADE the best read publication in print. This means that an advertiser in PARADE gets more than twice as many readers per dollar of ad cost as he gets from any of the big weekday magazines. On top of that, the impact PARADE makes on Sunday makes sales the rest of the week.



PARADE . . . The Sunday Magazine section of 43 fine newspapers in 43 major markets . . . with more than 13 million constant readers.

Barkow

weatherwise air conditioners

Mr. Jobber, Mr. Dealer

Are you getting your share of profits from the Air Conditioning Boom?

Are you going to be the Residential Air Conditioning Specialist?

If you are, then investigate a tried and proven unit . . . the BARKOW "WEATHERWISE."

refrigeration division

Aug. G. Barkow mfg. co., inc.

2230 south 43rd street, milwaukee 15, wisconsin

Sales Graph Points to Profit

Study Shows Most Used Appliance Sales Made During First 7 Days of the Month

OYSTER BAY, N. Y.—That much of a dealer's success depends upon "timing" in offering trade-ins to the public has been graphically shown by Coombs & Oliver, Inc., appliance dealer here.

Taking a fresh look at trade-in merchandising, the firm has kept a "running graph" for the past five years, during which the sales curve for reconditioned appliances has been plotted against the calendar. Factors such as the most effective type of advertising, best placement of used appliances in the store, the effect of displaying trade-ins alongside new appliances have been taken into consideration.

From the five years of study, Coombs & Oliver have come up with a unique, but impressively efficient selling system.

KEEP NEW, USED APPLIANCES ENTIRELY SEPARATE

"We merely concentrate our promotion during the first seven days of the month," it was pointed out. "More than that, we don't display reconditioned appliances on the sales floor at all. Instead, during the week on which we concentrate, we use a single large window to show reconditioned radios, refrigerators, washing machines, television sets, and small appliances. Thus, the items we have to offer are plainly visible, there is no conflict with new merchandise on the floor, and we are selling at a time when we are certain that the used-appliance prospect is most able to buy."

Actually, the Coombs & Oliver timing survey goes back a full 25 years. Taken into consideration was the fact that many used appliances are bought by the owners of wealthy estates in this area for their servants, particularly television sets and radios. Since most servants are paid at the end of the month, as are factory workers and government employes in the area, each is most willing to buy during the 7 days following payday.

RECONDITIONED UNITS SOLD ON SATISFACTORY SERVICE BASIS

All reconditioned appliances are sold on the basis of satisfactory service. The slogan utilized in the window which shows the entire trade-in lineup simply states "All In Good Working Order." The store is careful not to accept trade-ins which require extensive reconditioning or which do not make a good appearance. Thus, the window does no damage to the firm's prestige and more important it exercises its selling pull when the prospect has money to spend in his pocket.

Two methods are used to bring prospects in, in addition to "window pull." During the 7-day selling period, several advertisements are run in local newspapers, the number depending upon the stock of trade-ins on hand. Each newspaper ad is based purely on price and satisfaction, offering good, usable trade-ins at prices which leave a small profit. At the same time, a direct-mail announcement goes to better-income homeowners in the area, preferably those who own large homes and employ several servants. This letter lists the same appliances in letter form.

EMPLOYERS FORM NEW TYPE OF MARKET

This latter market, it was stressed, is extremely valuable, inasmuch as employers today try to keep help by furnishing servant quarters with television sets, modern kitchens, and other appliances. From time to time, such purchases of used equipment have totaled to more than buying by low-income customers who want the used appliances for their personal use.

Each month's sales results plotted against the calendar are posted in the store, so if there is a buying shift such as a major change in payday policies in the area, the appliance dealership can merely adjust its selling efforts.

"Pick out the proper time to promote used appliances and stick to it," it was urged, "The results can be really surprising."

Utility Sales Ideas Told In Servel Publication

EVANSVILLE, Ind. — Successful appliance sales programs by utility companies are featured in the first issue of a new Servel, Inc. publication, "Idea Exchange," which came off of the press recently.

Under editor Dick Geier, material is being compiled for "Idea Exchange" with the help of the company's advertising, sales promotion, and public utility departments.

Among the successful sales programs described and pictured in the first issue of "Idea Exchange" is the "Magic Key Campaign" used by the Southern California Gas Co. and the Southern Counties Gas Co., both of Los Angeles.

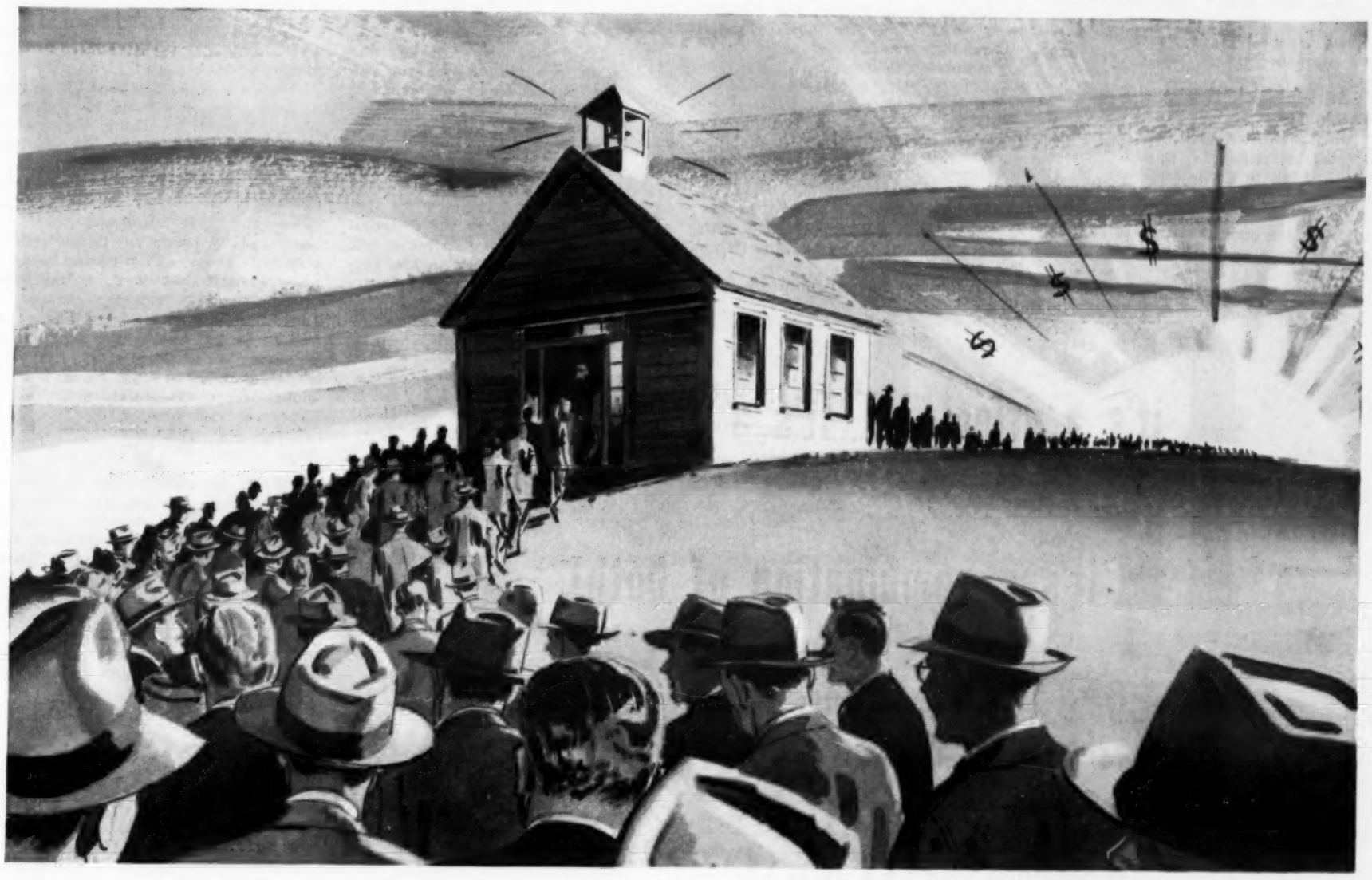
Under this plan, keys were mailed to gas-using families. Each recipient was invited to bring the key to a dealer's store and try to open the lock on the door of a Servel "Automatic Ice-Maker" refrigerator. The key that fitted the lock won for the lucky holder a complete chicken dinner for four.

Retailers were reported as being very happy over results from the "Magic Key Campaign." One dealer, for instance, said that 310 keyholders came into his store to try to unlock the refrigerator door. Of this number he made immediate sales to 10, and also obtained a valuable, list of prospects for future follow- up.

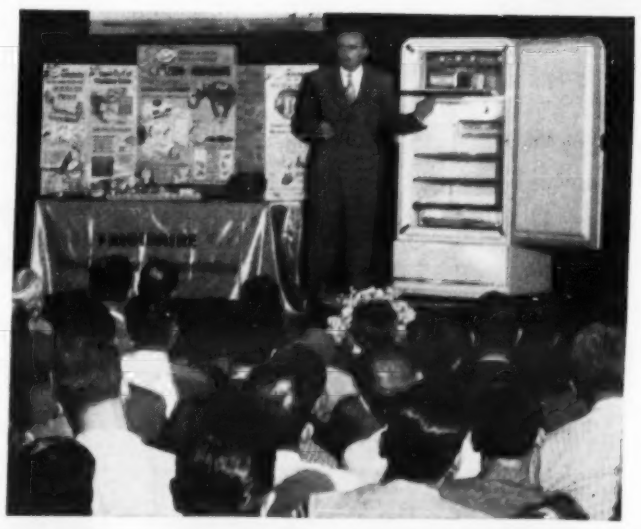
Among other promotion devices used in Southern California were refrigerator displays in banks, theaters, and supermarkets; "cooking with ice" demonstrations; a teenager's frozen dessert recipe contest, and a check list to help consumers choose a new refrigerator.

Another article in "Idea Exchange" tells how the South Jersey Gas Co., of Atlantic City, N. J., enlisted "wife power" to sell Servel refrigerators. Each salesman and his wife were organized into a "Man and Wife Sales Corp.," and wives shared commissions, bonuses, and prizes with their husbands.

"Individual utility companies are showing much initiative and ingenuity in developing advertising, promotion, and sales ideas," James F. Donnelly, Servel vice president in charge of sales, said.



All year long Frigidaire selling men are given post-graduate courses in salesmanship



Frigidaire's Professional Salesmanship School...a complete, 3-day "How to Sell" course in salesmanship. Based on the experience of successful dealers, it is recognized as the finest school on salesmanship that any manufacturer has organized to date.

MAYBE YOU'VE wondered why most Frigidaire salesmen stand head and shoulders above the crowd. Much of their success is due to the thorough sales training they receive as part of a program that has always been given top priority by Frigidaire.

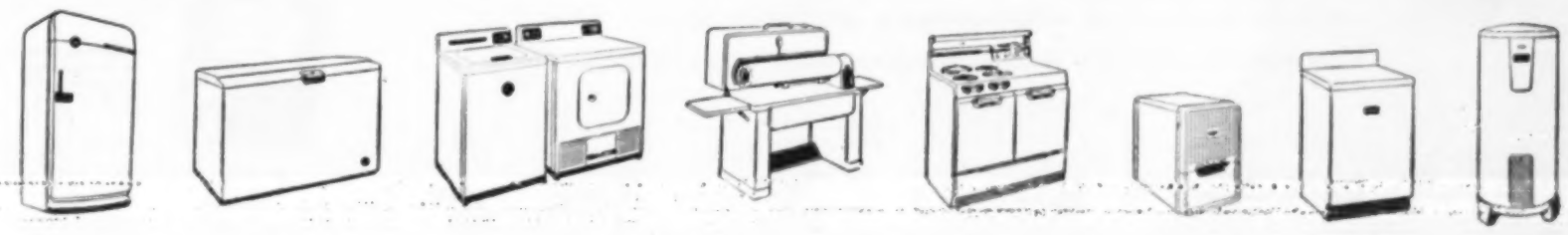
Sales training schools and classes are conducted at distributor and dealer levels the year 'round. Practical, money-making training helps are furnished to the field organization constantly. And these materials are prepared and created by men who have had wide experience in retail selling and know field problems through intimate contact.

For example, one of Frigidaire's many sure fire sales training materials is the Appliance Demonstrating Album – the most complete product demonstrating album in the appliance business. Another is the Slide Film Service that provides thorough training on products and techniques of salesmanship. The Frigidarian – a dealer and salesman magazine – presents timely information and successful dealer experiences. There are periodic sales training bulletins, and motion pictures suitable for mass selling or for the training and inspiration of salesmen. Plus more than 50 special selling helps, ranging from easel demonstrators to complete product cut-aways.

This constant stream of materials is but one of the many factors responsible for making the Frigidaire franchise so valuable and so treasured by Frigidaire dealers.

Frigidaire means more business . . .

more business for the dealer



low temperature
BRAZING ALLOYS

United WIRE

LABORATORY CERTIFIED ANALYSIS TO ALL STANDARD SPECIFICATIONS

are making strong gas pressure tight joints every day, everywhere in the refrigeration and air-conditioning industry . . . and the cost is surprisingly low.

BUY . . SIL-BOND . . . FOR STEELS
PHOSCO . . . FOR BRONZE
PHOSCO . . . FOR COPPER

AT YOUR PARTS WHOLESALER'S OR OUR NEAREST OFFICE

UNITED WIRE
& SUPPLY CORPORATION
PROVIDENCE, RHODE ISLAND
SALES OFFICES
New York Chicago Springfield, Mass. Philadelphia
Rochester Pittsburgh Lansing, Mich. Los Angeles
Minneapolis Akron Hartford, Conn.

How To Get Better Room Cooler Dealer

1. Back Him Up with Good Distributor
2. Help Him Understand What He's Selling
3. Make Him Responsible for Service

By George M. Hanning

CHATTANOOGA, Tenn. — "Take the mystery out of room coolers for the dealer and you will get better dealers," declares A. J. L. Moritz, Jr., Tennessee district manager for Chrysler Airtemp.

Moritz contends that many of the dealers who are guilty of price cutting, misrepresentation, and other bad practices are guilty mainly because they do not understand the product they are supposed to be selling and no one has taken the trouble to teach them.

"They're afraid of the room cooler," he said. "When a customer comes in and asks about one, the only thing they can say is, 'This is the price, we'll give you 20% off.'

"But the dealer who knows his product is proud and eager to talk about it when someone asks. And the more he talks about it, the more sure of himself he gets, and the more confidence the customer can feel in his judgment."

Moritz pointed out that when he or his distributors' salesmen go out to establish new dealers, they offer, and make sure that the dealer gets, all sorts of coordinated information to help him understand room coolers and to make the job of selling them simple.

He pointed out that the first requirement for a new dealer is that he buy a set of instructional manuals and a set of gauge adapters, which cost him $41. The manuals include an engineering manual containing the technical data about the product, a sales manual telling how to sell it, and a service manual telling how to service it.

Service is one "bugaboo" that many dealers shun, Moritz noted. "But we require that the dealer be responsible for his own servicing. We also make it easy for him by showing him that with the gauge adapters, he can determine the trouble easily and in many cases make the proper adjustments on the spot.

"We tell him that even the salesmen can handle these problems. All he has to do is put on the gauges, read what they say, and compare the reading with what is in the service manual. The manual will tell him what to adjust to correct the condition indicated.

Provide Ready Answers

"When he understands this, the salesman is not afraid of customer complaints. He is offered an excellent opportunity of getting in good with the customer by going out and fixing the trouble himself.

Moritz said that Airtemp not only provides these manuals, but it also schedules the dealer and his personnel for an immediate training session to ground him in the fundamentals of room cooling.

Then when the dealer makes his first sale, a serviceman from the distributor will go out and check, test, and start the unit, in the presence of the dealer, free of charge. At the same time, he will give the dealer complete instructions on how to perform this check, test, and start.

On the dealer's second installation, the distributor furnishes a serviceman at no charge to watch the dealer go through the check, test, and start and help him if necessary.

Make Serviceman Available On Time, Material Basis

After the second installation, the serviceman is available to assist the dealer in any unusual problems if the dealer so desires. He is available on a time and material basis at regular service rates and regular dealer prices.

On any job that the dealer feels is to big for him to handle or for any reason he would prefer the distributor to handle it, the distributor will so so, dealing directly with the customer and taking over responsibility for the job. The distributor will subcontract that part of the job to the dealer that he desires to handle himself and will pay a commission to the dealer based on prior agreement and the extent that the dealer contributed to the sale.

Once the new dealer has received this training and help and has absorbed it, he will make a better dealer than some air conditioning men who have been in the business for many years. The latter will attempt to use various devices they have picked up over the years to cut corners and to shave a bit off the price. The new dealer, on the other hand, doesn't know any so-called short cuts, and thus tends to do the job right and avoid customer complaints, Moritz believes.

Emphasis Is on Teamwork

Moritz' technique in selling his Airtemp franchise to new dealers may be of interest to other air conditioning distributor salesmen:

First, having gotten the dealer's consent to listen to his story, he unfolds briefly the details of what his company has to offer in the way of product, its advantages over competition, and the sales helps that the company has prepared for the dealer. Emphasis is placed on the "teamwork" between manufacturer, distributor, and dealer.

When the story has been presented, he asks: "Any questions, Mr. Jones?" We give here the closing arguments —with comments—just as Moritz has prepared them for his own use:

If this presentation has been given effectively, Mr. Jones will have questions—but the questions can be answered by follow up to the points outlined above. Price has been a question and that question has been most effectively answered by:

"Mr. Jones, a person can buy a Willys or an Austin, for truly it is a mode of transportation. But instead he buys, in most cases, a Plymouth or a Chevrolet, or a more expensive car.

Sell 'Prestige'

"Why? Because he has bought on quality and prestige. He buys the item which he can show to or can be seen by his friends or neighbors and which he can be sure his neighbors or friends are aware of the quality. Remember, a room air conditioner is exposed to the outside and in 65% of the cases, in the living areas."

So you play up the "show" advantage as your dealers should play up the "show" idea.

The obvious question then follows. Mr. Jones asks: "What does this dealership require?" Here you have brought him out. You are now on the defensive.

"Well, Mr. Jones, the truth of the matter is that today's call wasn't just one of chance. Rather, if you please, we have taken the liberty of canvassing this area and find your business as the one better qualified and more desirable to handle our line.

"In view of this, we respect your decision. Also we realize that the season is already well under way. Time, to be sure, is short. And for us to ask a large outlay on your part, we know, would require your serious thought and probable discussion with your associates.

Create Desire for Franchise

"Therefore, the only requirement to obtain a franchise, Mr. Jones, is your assurance that you would like to be one of the team. Naturally you will want a display on your floor to tie in with your announcement as a dealer.

"In this display you will want to show a ¾-ton unit and a 1-ton unit, with at least three units for replacement when the first ones are sold. Then we suggest you place at least an extra three units for shipment.

"In other words, Mr. Jones, we ourselves know that these units will sell. You are not sure. Therefore, instead of loading you up, we just want you to have a display and a basic stock.

"Then when you see how these units sell, we can make other arrangements accordingly."

Pause—do not say a thing or do not move until Mr. Jones makes a statement. Instead, just look him straight in the eye. This is the crucial moment.

Chances are Mr. Jones will make one of the following statements:

a. "I've got to give this some thought."

b. "What are your terms?"

c. He will awkwardly wait for you to continue, finally asking some question to which he already knows the answer or to which the reply has already been given in the presentation.

At any questions, this is your time to smile—and, while smiling, reach into your briefcase and pull out the franchise agreement—at the same time answering his question.

There are only two statements he can make that make it impossible for you to immediately continue. They are:

a. "I'm not interested."

b. "Call me later. I've got to think it over."

To a., it is up to you as a salesman to consider the situation. You

(Concluded on next page)

SALES EXECUTIVE

The manufacturer of one of the country's best-known lines of equipment, allied to heating, ventilating and air conditioning, is seeking a Division Sales Manager for the central territory embracing 13 states. This man must be a seasoned salesman and administrator, know how to work with and direct the activities of manufacturers' representatives and have wide contacts with architects and consulting engineers. He must have some knowledge and experience in selling large end users.

The successful applicant will represent a firm whose products are accepted among the industry's leaders, nationally advertised, and Underwriters' Laboratories approved. This man must be of high calibre and should be between 30-40.

This unusual opportunity offers a salary arrangement commensurate with ability and background and participation in a generous company bonus policy.

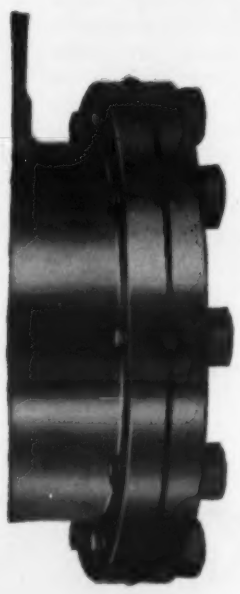
Write in full, enclosing snapshot if possible. Our employees know of this advertisement. FARR COMPANY, Central Division Office, 5423 West Belmont Avenue, Chicago 41, Illinois.

it's a drier! it's a strainer!

it's a combination of both!

The sensational new versatile
MUELLER BRASS CO.
CARTRIDGE DRIER
in capacities from 1 h.p. to 40 h.p.

4-cartridge, 4" diameter shell, 40 h.p. capacity model



The new Mueller Brass Co. Angle Type Cartridge Drier is designed to meet every operating requirement. Versatility is the outstanding feature of this unit. To secure this versatility, special strainer cartridges were developed to the same dimensions as the standard drier cartridges. These drier and strainer cartridges are completely interchangeable size-for-size. In a system requiring extra strainer capacity, a strainer unit may be placed in the shell ahead of one or more drier cartridges. For added protection and still more filtering area, the new unit has a special "safety screen" at the outlet end.

Look at all these outstanding features:

- spun inlet end provides strong, leakproof construction . . . faster heating for soldering.
- flanged end is positively sealed by neoprene asbestos gasket, with minimum bolt torque.
- cartridges are non-directional . . . filter screen and dispersion plate at each end insures even distribution of high velocity refrigerant for maximum desiccant contact.
- the new silica gel PA 400 desiccant provides up to 98% more drying capacity.

117-R

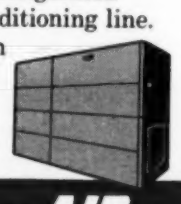
STREAMLINE PRODUCTS

MUELLER BRASS CO. PORT HURON 9, MICHIGAN

U.S. AIRCO
30 YEARS OF AIR CONDITIONING

A complete "packaged" refrigerated air conditioning line.

For dealer plan write Dept. ACRN 14.



Window Units ½, ¾, 1 H.P.
Packaged Air Conditioners 2 to 10 H.P.
Packaged Central Station Air Conditioners 3 to 50 H.P.

U.S. AIRCO
UNITED STATES AIR CONDITIONING CORPORATION
MINNEAPOLIS 14, MINNESOTA

INTERNATIONAL®
AIR Conditioner COVERS

The market's everywhere, ready and waiting, and ever-growing for these new International Air Conditioner Covers. Every air conditioner needs one — no owner can do without it — protects against rain, snow, rust, drafts and dirt—saves costly servicing and repairs. Fits all air conditioners (21 custom made models to choose from). Attaches in a jiffy — fits perfectly. Waterproof, flame-resistant, self-extinguishing. Neutral tone durably stitched with black plastic binding and reinforced with stitched-in metal stays.

Individually boxed in envelope type package. To retail from $6.45 to $8.45.

Made of Heavy Gauge Firestone Velon

Write for price list.

INTERNATIONAL AIR CONDITIONER COVER
39 Gt. Jones St. New York 12, N. Y.

Better Dealer--

(Concluded from preceding page)

must decide for yourself how pointed his statement was meant to be.

To b., however, a statement like that means as much of a sale as an actual "I'll buy now—what do I sign?" Because you say:

"Mr. Jones, as I mentioned before, the season has gotten well under way. I know you appreciate the fact that we have to get our open areas closed so that we can run blanket announcements and advertisements as soon as possible.

Ask Him To Try It

"I appreciate your serious consideration on this matter and, with your permission, I would like to have you go ahead on the idea. Then if you decide not to take the franchise, you can let us know before our new dealer department sends out the kits and display stands and display units, which will be in about a week."

So you've got him on your side. He is becoming a dealer and, at this time, there should be due attention paid to ceremony. The agreement is laid in front of him. The fine points are made clear and, upon his signature, your witnessing signature should be made in a mood of newfound friendship.

Upon execution of the agreement and signing of the order, you should make arrangements for some kind of indoctrination meeting for Mr. Jones and his employes.

"Mr. Jones, welcome on the team. It was a real pleasure to meet you today and I know we are going to have a long and mutually profitable connection. We will be getting in touch with you in the next few days. Shake hands."

White, Weber Appointed To Remington Sales Posts

AUBURN, N. Y.—Appointment of Louis F. White and Fred A. Weber as district sales managers for the Air Conditioning Div. of Remington Corp., was announced here recently by M. L. Judd, general sales manager.

"Both men will work directly with Remington's recently appointed regional sales manager, John P. Moffitt," said Judd. White will represent Remington room air conditioner sales in six New England States and in the Albany—Troy, N. Y. trading area. Weber will be in charge of the metropolitan New York trading area and New Jersey.

White, who makes his headquarters at 23 Selwyn Rd., Belmont, Mass., has spent the past eight years in the appliance business at both the factory and distributor level. He came to Remington from the Avco Mfg. Corp., Crosley Div., where he was New York and New England zone manager. Prior to that he was sales representative for Allied Appliance Corp., Boston.

Weber, whose headquarters will be Remington's New York office in the Lincoln Bldg., has a background of five years in the appliance business in the New York metropolitan area. Before joining Remington, he was sales manager of refrigeration and traffic appliances for the E. B. Latham Co. in New York City.

E-Z-SEE
LIQUID
INDICATOR
NEW FLO INDICATOR FLAP
SHOWS ALL FLOW CHANGES
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Local Dealer Groups Form In 3 States, D. C.

CHICAGO — Local area organization activities are being reported regularly to the offices of the National Appliance and Radio-TV Dealers are in process of forming the Greater Springfield Appliance Dealers Association; Escanaba, Mich., retailers of appliances and television are organizing into the Delta TV Association; Washington, D.C. appliance-TV retailers have not only organized, but affiliated with the National Appliance and Radio-TV Dealers Association; in Wisconsin, increasing television interest has caused the growth and organization of the Marathon County Appliance-TV Association.

Results with New Facilities

8 Air Conditioned Rooms Aid Environmental Research at University of Illinois Hospital

CHICAGO—Details of the air conditioned facilities for environmental research at the University of Illinois College of Medicine and some results of such research were presented before a recent meeting of the Illinois chapter, American Society of Heating and Ventilating Engineers by Prof. M. K. Fahnestock and Dr. Ford K. Hick.

Eight air conditioned rooms are included in the recently completed new facilities of the university's hospital, said Prof. Fahnestock, who is research professor of mechanical engineering and chairman of the ASHVE technical advisory committee on physiological research.

Temperature of the rooms, he said, may be varied from 45° to 120° F. while relative humidity may be held from 20% to 80% at any dry bulb temperature. Permissible deviation in temperature is plus or minus ½° F.; the relative humidity is held within limits of plus or minus 2%.

Separate air conditioning equipment is provided for each room to permit flexibility and to make the conditions of each room independent of those in other rooms, Prof. Fahnestock explained.

Dr. Hick, who is professor of medicine in the university's Department of Medicine and a practicing clinical physician, reported on certain research findings.

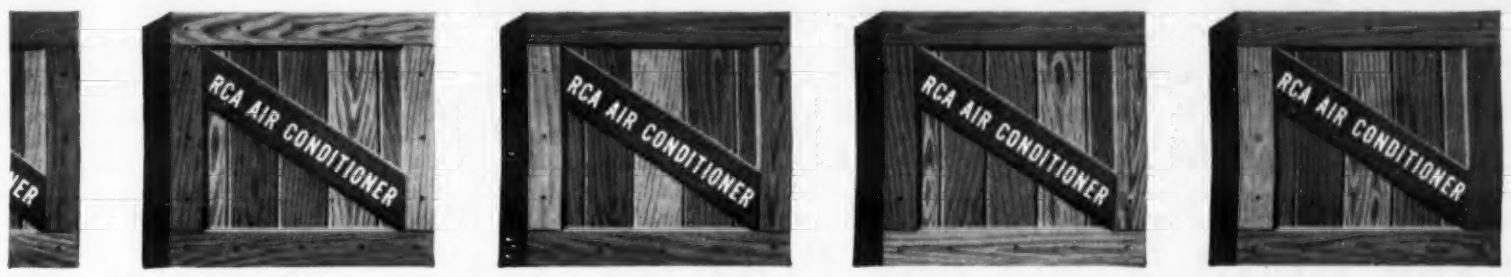
He pointed out that metabolic heat is moved from its source (deep tissues) to the surface (peripheral tissues) to maintain a constant deep body temperature. The heat that is brought to the surface of the skin is dissipated to the environment by radiation, convection and conduction, and water. In comfortable environments the heat production of nude resting men just equals the heat loss, of which 60% is lost by radiation, 25% by evaporation, and 15% by conduction and convection combined.

Dr. Hick also mentioned that resting women maintain a lower heat production than similarly clothed, resting men at environmental temperatures ranging from 72° to 95° F. The mean skin temperature in women is lower than that of men in cool environments and greater in warm environments. Because of greater heat losses in warm environments, women are better able than men to adjust to warm environments without resorting to gross sweating.

Among other findings of research studies, Dr. Hick pointed out that patients with compensated cardiac disease are perfectly able to adjust from a comfortable space to a hot, humid environment, and back to the comfortable space.

Jacobson Heads Connor Export

DANBURY, Conn.—Ishier Jacobson has been named manager of the export division, Connor Engineering Corp., manufacturers of air conditioning specialties.



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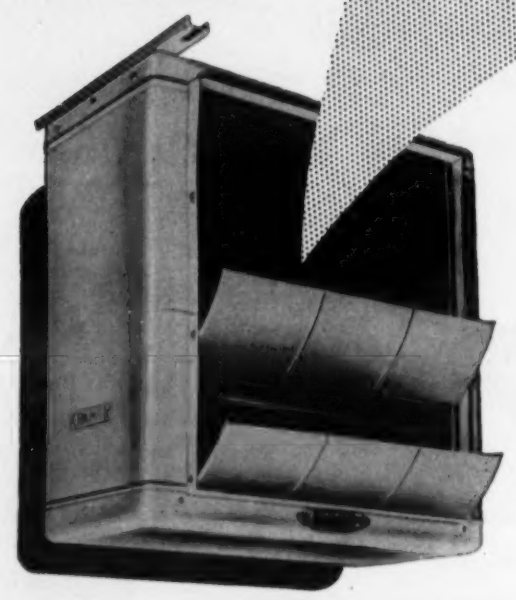

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—*Charles A. Dana.*

Problems, Problems, Problems

LIFE'S problems rarely are so bad as they seem – no matter what we may think at any particularly troubled moment.

The history of civilization resolves itself into an evolution of problem-solving, plus individual *adaptation* to unexpected crises.

Careful study of history also reveals that rewards *do* come, eventually, to men and women who deal with *facts* imaginatively – and who don't expect too much too soon.

Historically admired Americans have experienced shattering hardships, and have struggled out of mind-straining traps.

To earn their revered positions they've suffered, labored, and – after years of adjusting to bad times and good – achieved a philosophical attitude toward the vicissitudes of Life. They've learned to take ups and downs calmly, and to be patient.

Quite a few of these great men (who have helped others enjoy life more) frequently defied the easy urge to "conform with the norm." They persisted in their right to be DIFFERENT, and were unaffected by the criticism of those who lacked their foresight. Thomas Edison comes to mind, also Benjamin Franklin, Henry Ford, Herbert Hoover, and "Boss" Kettering – to name only five amongst hundreds.

The urge to be DIFFERENT, to be independent and unordinary, is frowned upon by those who insist on being staid, however. And that is a shame. Said attitude will hamper our progress.

The writer has known an extraordinary number of Horatio Algerish citizens. We give you Our Word that they're all grand fellows – sane, well-balanced, and undisturbed by either bad or good luck. They take whatever happens to them in stride.

BUT: Every one of these *succeeders* deplores the "bleeding heart" belief that any lazy lug has a "right" to be supported by thrifty grandfathers or worried taxpayers. They think a young fellow grows by surmounting troubles – and that it isn't good for him to get things too easily.

Friendship and respect must be earned, they insist.

The same philosophy should hold true on a national scale. Few of us would rob a store or a home. Nevertheless, political blocs do gang up to snake away *billions* of our tax dollars. Witness: our national farm subsidy program, and our international "give-away" policies.

Foolish liberality with our people's money can lead to national bankruptcy – the economic collapse which Stalin predicted for us, which Malenkov expects, and which American fellow travellers await impatiently.

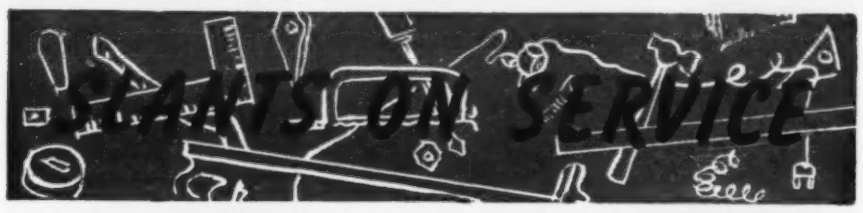
Let's 'smarten up.' Let's quit asking for favors, and help Eisenhower cut government spending. And let's be men enough to *take tough times,* if need be. Furthermore, let's encourage those who are courageous enough to be DIFFERENT.

Some say that nowadays young folk refuse to suffer – or wait patiently – to get big jobs and EARN recognition. Grandparents audibly and plaintively wonder how the youngsters (of whom they are so fond) can solve tough problems without going through a long apprenticeship and plenty of rough troubles.

Grandpaw could be right about his apprehensions.

Our forefathers survived all kinds of hard knocks, and became better and bigger men in the process. If we're *babies,* we'll cry when our profits and wages don't continue going up and up and up forever. If we're *men,* we'll buckle our belts and readjust.

Only through surmounting troubles can we become impregnably strong. And by giving leeway to Extraordinary Wizards, normal, ordinary, and orderly people will *get* ahead farther and faster.



"Slants on Service" is a "package" devised by the NEWS to aid readers in the service and contracting business.

Merely Changing Parts Doesn't End Problem

"Once there was a serviceman who had studied and practiced his craft to the point where he complacently felt in his secret soul that he was a rather better trouble-shooter than most," recalls Virgil C. James.

"He despised with a scathing scorn those hangers-on of the profession known as 'parts-changers,' who never really learn how and where to spot trouble, but change one part after another in a hit-or-miss fashion until they 'hit' sooner or later.

"One day our friend, the superior serviceman, was called on to find out why a home freezer wasn't performing properly. Arriving on the job, he found an orphan-brand, wooden-chested, 6-cu. ft. freezer. And only by an extremely courteous stretching of the term could it be called a freezer, he noted mentally.

"It was powered by a ¼-hp. open unit of standard make, which might have been large enough in itself; but the cabinet had only a scant 3 in. of loosely packed insulation of the rockwool type, and with no vapor seal to prevent moisture infiltration. The evaporator coil was bonded to the side of the liner in serpentine fashion. This was o.k., except for the fact that the coil was fed by a common domestic-type of automatic expansion valve."

VALVE SET FOR 0 P.S.I.

"The compound gauge showed that this valve had been set for a back pressure of about 0 lbs., which with the "Freon-12" refrigerant should produce within the coil a temperature of about -22° F. This would seem to allow for ample temperature differential so that the air within the cabinet should hold at well below zero.

"Fine in theory, but in practice no good at all; how in the world could an automatic expansion valve, designed for higher temperature use and for small domestic evaporators, operate a long coil at low temperature? No wonder the factory guilty of such all-around poor engineering didn't stay in business very long, thought our hero.

"The coil was never at any time more than half active; hence the air temperature in the cabinet never got below about 15° F. Since the control was set for a cut-out of -10° F., the unit ran constantly but the box was never really cold. This was, of course, the complaint, and our friend figured that by replacing the automatic valve with the proper type of thermostatic valve, the trouble would be cured. Of course, the unit would always run more than it should because of the poor cabinet construction; but there wasn't much he could do about that."

"However, before pumping the system down and installing a TX valve, the serviceman decided to try different adjustments on the AE valve to see if by any chance it could possibly be made to function on a long coil at low temperature. To him this seemed such an outlandish example of misapplication that for his own education he wanted to see if it could be made to work, even for a short time. So he opened the adjusting screw a quarter-turn at a time, and got higher readings on the compound gauge and momentary flooding of the coil.

"But then he began to notice something peculiar. Every time he opened the valve and flooded the coil, the compound gauge reading, after rising, slowly but surely dropped back to lower and lower readings, going down to 5, 10, 15 in. of vacuum, and leaving smaller and smaller patches of frost on the coil. Well! Nothing left but to take off the offending AE valve. So he shut off the receiver valve and pumped down the system.

"Loosening the flare nut ahead of the AE valve, he removed the strainer screen for inspection. Clean; no block there. Take off the darn thing and put on the right type of TX valve and be done with it.

"So doing, he cracked the receiver shut-off valve to purge the liquid line, the new TX valve, the evaporator coil, and the suction line back through the compressor. The discharge valve on the compressor had previously been front-seated, so purging was done through high-side of gauge manifold.

"Now he started the motor so as to evacuate by the 'double-evacuation' method, allowing more 'Freon' from the receiver to be pumped through the compressor and out the discharge valve. Pumping was continued until compound gauge indicated about 29 in. and stayed there; then all valves were shut and motor turned off, to see if system would hold this vacuum. It did, so apparently there were no seal or other leaks.

NEW VALVE WORKS FINE—AT FIRST

"Now the receiver valve was opened and the system put in operation. The new TX valve worked perfectly and shortly there was a beautiful patina of frost over the entire coil. The compound gauge indicated a steady fall in back pressure as the temperature inside the cabinet began to creep downward the desired zero point. The valve was feeding the coil correctly, keeping it fully active as the back pressure decreased.

"But now—what was this? Frost was appearing, of all places, on the liquid line ahead of the new TX valve and all the way back outside the cabinet and right on down to the liquid receiver shut-off valve. Who ever heard of a thing like that? At the same time, the compound gauge began to register rapidly lower readings, but the air temperature inside the cabinet began to rise. And the beautiful live frost began to soften and fall off in soggy dead chunks.

"Finally, there it was again—only a disgusting little patch of frost near the outlet of the TX valve, with the rest of the coil dead as a doornail.

"At this point our friend, the superior serviceman, began to feel just slightly deflated. The unit wasn't behaving any better with his new TX valve than it did with the old factory-installed AE valve. And here was this new complication, the frosting of the liquid line. If it did that before with the old valve, he hadn't noticed it. But it was certainly doing it now.

"Nothing to do but pump down again and remove the liquid line at the receiver. There had to be a restriction sufficient to cause pressure reduction and frosting. But removal of the flare nut and a look into the line revealed nothing; no kinks, no scale, no foreign matter.

RECEIVER VALVE CLOGGED

"Our friend now stared thoughtfully at the receiver itself. It was a vertical type, bolted to the unit base, and its shut-off valve was of the right-angle type, threaded into the receiver body. Maybe it wouldn't hurt to remove the receiver, clamp it in a vise, unscrew the shut-off valve to see what he could see. This meant taking the receiver back to his shop, but it was the logical next step.

"Considerable tugging with a pipe wrench finally brought the valve out of the receiver—to reveal that the angle passage of the valve body was almost completely stopped up with a black, hard, brittle substance that must have been carbonized oil. No wonder hardly any refrigerant could get through.

"Removal of this substance and a thorough cleaning of the valve and receiver ensued, and on reassembly the unit operated perfectly and has continued to do so for about three years now.

"Theorizing a bit, our friend concluded that, first, the original automatic expansion valve was not adequate for the the job; second, therefore the unit was forced to run excessively, and also had to run more because of the poor cabinet construction; third, hence the compressor became chronically 'overheated,' the hot, thinned oil was forced over into the receiver in abnormal amounts, and in the cooler receiver crystallization occurred, the solid particles then proceeding to plug up the small service valve opening."

How To Sell Maintenance Contracts

HARRISON, N. J.—Firmly convinced, as are manufacturers and most contractors, that preventive maintenance contracts are absolutely essential if the user is to get the best service out of his air conditioning equipment, E. C. Hamilton, service manager of Worthington Corp.'s Air Conditioning Div., tells a favorite story of a "clincher" that convinced a reluctant prospect for such service.

"A certain contractor handling our line had been trying to sell the operator of a local drugstore chain the idea that he ought to have a maintenance contract covering the numerous package air conditioners cooling his several stores," Hamilton recalls.

"The contractor, however, hadn't been able to get anywhere with the owner, so I offered to help him out, if I could. As we drove into the parking lot of the main store in the chain I noticed a big, shiny, new Cadillac, which I assumed belonged to the head of the chain. Fortunately, my guess was right.

"After we had talked briefly with the owner and he told us again that he wasn't interested in a maintenance contract, I said to him:

" 'Now, you have a new Cadillac out in the lot.'

"He nodded his head.

" 'Now I assume that you take that new car into the Cadillac agency every month for an oil change and lubrication job, and that you expect the mechanics to check over the car generally and correct anything that may be wrong.'

" 'Yes, I get wonderful service,' he nodded in agreement.

" 'Well that,' I told him, 'is simply preventive maintenance.

" 'Now we aren't asking you to drive these 5-ton air conditioning units to a dealer's shop every month to have them serviced,' I said. 'We merely want a contract with you so that a man can come to your place of business and service the units the same way the mechanics service your car!'

"Apparently that sold him," Hamilton says, "for he then asked, 'can you handle other units besides your own make?'

"When we assured him that we would and could, he signed the contract."

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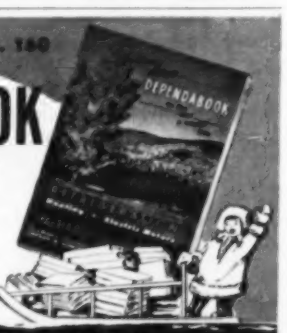

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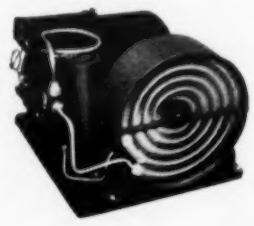

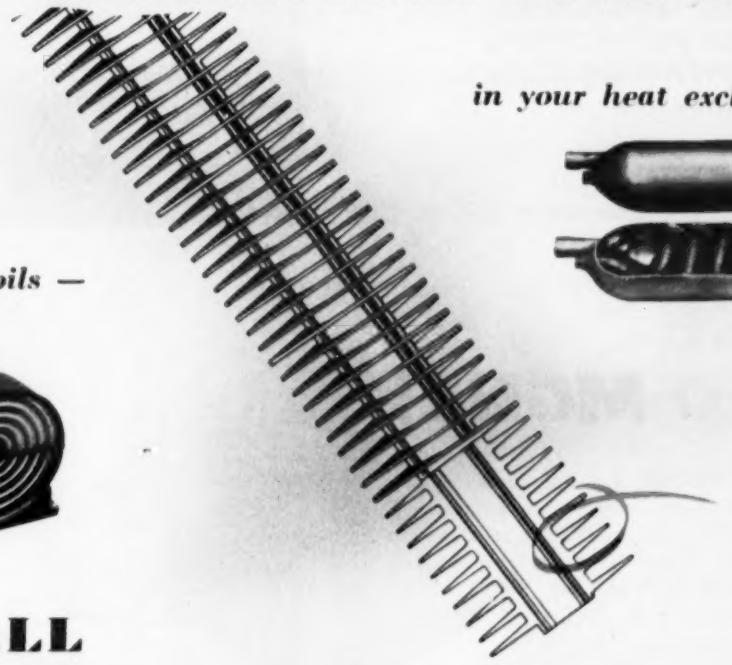

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6. Trufin is made in copper, copper-base alloys, aluminum and both stainless and carbon steel; also in bi-metal aluminum fins over a copper liner.

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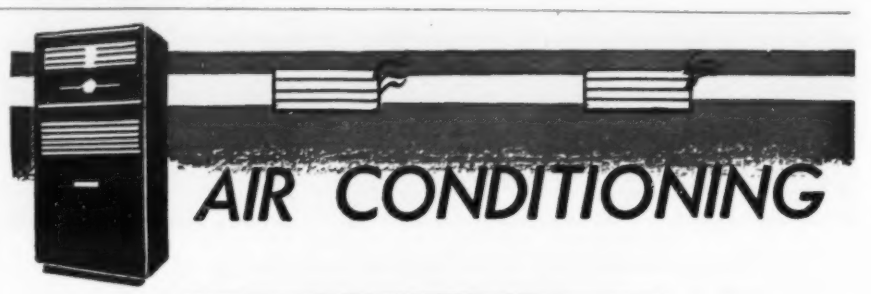
Fan Design Trends

Demand for Smaller, Quieter, More Effective Air Moving Equipment Requires Cooperation from Motor Producers



FORT WAYNE, Ind.—Current design trends in fans will require improvements in present motor design, according to Wm. H. Wentling, assistant chief engineer of the Lau Blower Co.

"The engineers designing fans for today and tomorrow are confronted with an ever increasing demand for new designs and new models each year by their sales departments," he declared, speaking at the conference on "Application of Motors to Air Moving Equipment" sponsored here by the Fort Wayne section of the American Institute of Electrical Engineers.

Fans Must Keep Pace With Interior Decoration

"These new styles must keep pace with trends in interior decorating where portable and window fans are concerned," he said. "Attic fans must be more efficient, more quiet, and provided with new and better features.

"Engineers designing fans in the circulator, hassock, portable, and small window fan class would like to have available for tests, both six and eight-pole shaded pole motors of a special design. This design would provide a stationary rotary, probably wound, in a rotating stator, as we think of the respective motor parts today. The motor would be mounted by its foreshortened shaft and the blades would be affixed to the outer case, allowing for more compact fan design and probably saving as much as 2 in. in fan thickness," Wentling explained.

"It is imperative that the shaded pole motor designers re-double their efforts to reduce the inherent hum and vibration at the 60 cycle per second or its harmonic levels, as well as to increase their normal efficiency," he advised.

"If we consider the possibility of building the larger window fans, 24 in. through 30 in., with direct-driven blades instead of belt driven, we must remember that the tip speed must be kept below the 4,000 ft. per minute level.

"It is obvious then that the split phase motors for direct driven fans in this range of diameters and capacities must be of the eight, 12, and 16-pole design. Although some motor manufacturers have introduced motors of the so-called 'pancake type' in the eight-pole design, they are not of a size, weight, and price to make them attractive to the average fan engineer.

"This condition can be attributed, in some measure at least, to the low production volume. There are, of course, a few exceptions where the manufacturer produces both motors and fans, or has a subsidiary producing motors.

"The idea of direct driving more and longer fans is appealing to most fan manufacturers as it reduces production operations, eliminates expensive belts, pulleys, shafting, and bearings, which are all savings which can be passed on to the consumer. The elimination of belt drives also aids in the reduction of noise, providing suitable motors are made available to the fan design engineer.

Fans Have Become Big Business

"The fan industry is now enjoying universal acceptance of its products at the consumer level, and since the weather for the past two summers has been instrumental in making people fan conscious, the sale of all types and sizes of fans has become big business for the manufacturer, jobber, dealer, and parts supplier. More than ever before, it is imperative that the fan and motor design engineers work hand in hand, each recognizing the others problems, to further advance the science of air movement for human comfort," Wentling urged.

"Up until the time World War II more or less interrupted the advancement in domestic appliance design, many manufacturers were building fans driven by so-called standard production Nema frame motors. Most of these fans were operated at synchronous speeds of 1,725 r.p.m., and 1,140 r.p.m., with a few running at 860 r.p.m., but with a very low c.f.m. rating

Trend Toward Shaded Pole Motors Explained

"Compared with todays fans, these fans were very heavy, very noisy, equipped with guards that were neither finger-proof nor attractive in appearance. In the last few years, the use of shaded pole motors in direct driven fans with blades up through 20 in. in diameter has become almost universal. Some reasons for this trend toward shaded pole motors are their comparative low initial cost, lighter weights, compactness, and ease of speed control.

"In the beginning of this trend toward shaded pole motors, most of the motors used were of the four-pole type, running at 1,500 r.p.m. However, at the present time most fan design engineers prefer the six-pole type running at about 1,000 r.p.m. for fans of over 12 in. blade diameter, since it allows them to keep their tip speeds within the range for quiet operation.

"Further, the use of 5 in. or 5½ in. diameter lamination allows the motor design engineer to shorten his lamination stack length, giving the fan design engineer the opportunity to design a fan which has a thin, attractive appearance and is compact and efficient.

"The types of fans using shaded pole motors are portables, circulating, window, pedestal, mobile, and hassock. By virtue of their size and design, they are used in close proximity to the persons requiring comfort. Therefore, they must be attractive, efficient, quiet, light in weight, sensibly priced, and many of them will require UL approval. The UL approval in the case of the window type fan requires the unit to pass a rather severe rain test.

"Passing now to the window type fan designed to provide comfort for more than one room, even entire homes of the small and medium size. These fans are usually of the belt-driven variety and provide a choice of blade diameters for the most part of 20 in. through 30 in. Why are these fans belt driven, with obvious additional costs of belts, pulleys, shafts, and bearings? Simply because fans with the larger blade diameters must be turned at an r.p.m. which will provide a blade tip speed of 4,000 ft. per minute or less for quiet operation.

Window Fan Motors Developed From Washing Machine

"The belt drive window fans available on the market today are using, for the most part, special purpose motors which have been developed from the washing machine motor.

"Most of the improvements made in these motors, over the basic washing machine motor, were the outgrowth of Underwriters' Laboratories requirements. Drip-proof end frames as well as double varnish dip and bake on the windings were necessary to pass the rain test. The performance of this type of motors can be improved if the fan designer can provide sufficient air over motor to maintain a 50° C. rise while operating at above normal nameplate rating imput.

"Many manufacturers are now offering belt drive window fans in two-speed models, and two-speed reversible models, as well as the single speed model. The two speed and two-speed reversible motors for these fans require winding leads to be brought out of the case in sufficient length for attachment of switches, or connected to terminal studs in the end frame for connecting switch wiring harness. Even though these motors have been improved somewhat from the washing machine class, their rotors, stators, shafts, starting switches, bearings, etc., are identical, putting them in the very high production class.

Motor Cost Is Biggest Item In Fan Production

"Needless to say, the cooperation of some motor manufacturers, in the development of suitable motors for specific fan applications, has helped the fan design engineer produce fans which are within the reach of the average prospective consumer, price-wise. It must be remembered that the cost of the motor is the greatest contributing factor to the actual cost of building a fan," Wentling said.

"Considering now the attic type exhaust fan, we find that the fan design engineer has somewhat more latitude where motors are concerned. Since these fans are generally installed in a permanent location in the home, not within the living quarters, the appearance and size are of less importance than in the case of the portable or window fans used within the living quarters.

Size, Weight Important Even In Attic Fans

"Size and weight are still important insofar as ease of installation, shipping, etc., are concerned. However, standard production, Nema frame split phase, cap start, dual voltage, ball bearing motors can usually be used. The attic type fan, again, is almost always belt driven and for the same reasons as the belt driven window fans. They are offered in sizes from 24 in. blade diameter to 48 in. blade diameter, with capacities from 4,000 c.f.m. to 20,000 c.f.m., and with motors from ⅓ hp. to ¾ hp.

"We can divide these fans into two general classes, the vertical panel horizontal discharge, and the horizontal panel vertical discharge, often called a 'rancher' fan, indicating the style of house it is usually used in. The vertical panel horizontal discharge type attic fan is usually supplied with a sleeve bearing motor in either single or dual voltage.

"Since the fan is installed in a remote location in the house, Underwriters' Laboratories and most local electrical codes require that the motor be equipped with an approved Thermal overload protector. In addition, some local codes require some type of thermal line cutout switch in the air stream between the ceiling grille and the fan to disconnect the line in case of fire.

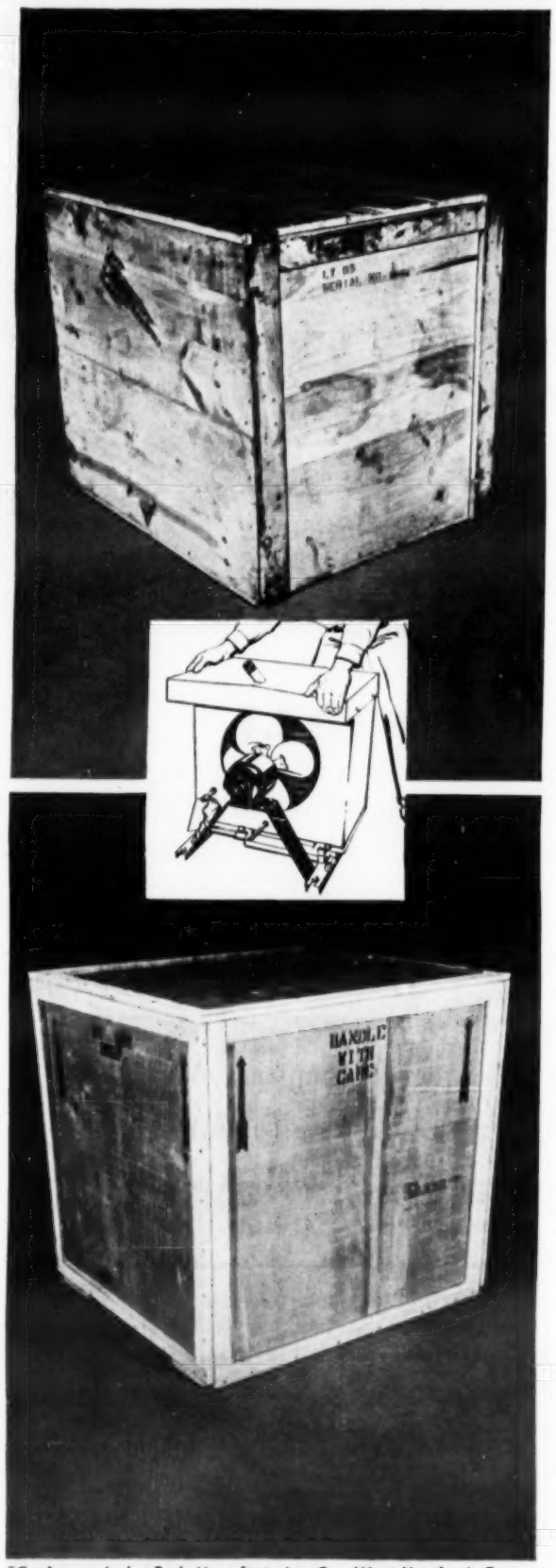
"The horizontal panel vertical discharge (rancher) type attic fan is usually equipped with ball bearings on the fan shaft as well as the motor shaft. Other than this, the motor will have the same characteristics as the one used in the other type fan.

"There is a definite movement toward the use of two speed motors on both of these types of attic fans, with the advantage of reduced air movement on days in the spring and fall where some ventilation is required, but the full capacity of the fan is not needed. Some motor manufacturers have experienced difficulty in obtaining thermal overload protectors for two-speed motors which would pass the Underwriters' Laboratories requirements," Wentling commented.

"CASE" HISTORIES FROM ATLAS PLYWOOD'S SHIPPING CONTAINER CLINIC

(Safe-Transit Certified)

New case designed by Atlas Plywood engineers weighs 47% less than previously used wooden box . . . holds contents more securely . . . reduces shipping costs



THIS CASE WASTED MONEY

This cumbersome wooden box was the container previously used for shipping a unit cooler*. On arrival at the Atlas Plywood Shipping Container Clinic, the gross weight of box and contents was 220 pounds. Because of inadequate blocking, the cooler was loose in the box.

THIS CASE SAVED MONEY

After thorough laboratory investigation, Atlas Plywood engineers designed this plywood case. Much stronger, and with more secure blocking than the old wooden box, it is a safer shipping container. And being 47% lighter than the box — 41 pounds as against 77 pounds — it reduces the gross weight by over 16%, *for a considerable cut in shipping costs!*

CAN YOUR SHIPPING COSTS BE CUT?

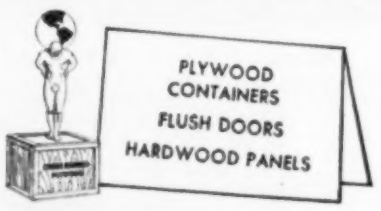
There's one sure way to find out. At no cost or obligation to you, your present shipping containers can be tested in the Atlas Plywood Shipping Container Clinic, on equipment that simulates all conditions of actual transit. If improvements are needed in your container design, Atlas Plywood engineers will submit them for your approval.

It should then be pretty clear to you whether you can reduce your shipping costs, including what you pay for shipping the container and what you pay for damages.

This free service by Atlas Plywood — *the greatest name in plywood* — includes an invitation to come along and watch the tests. Your Atlas Plywood representative (see Classified Telephone Directory) will be glad to make the arrangements. Or write to Atlas Plywood Corporation, 1432 Statler Building, Boston, Mass.

*Cooler made by Bush Manufacturing Co., West Hartford, Conn.

Atlas Plywood
CORPORATION
FROM FOREST TO FINISHED PRODUCT ®



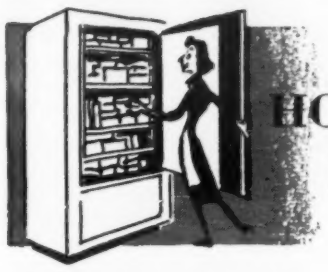
LARKIN HUMI-TEMP UNIT

For clean, smart lines, satin-smooth finish, harmonious color and overall good looks—Larkin leads. Behind this beauty is the quality and performance that keeps Larkin out in front! •

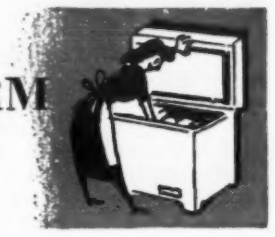
Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS INC.
519 MEMORIAL DR., S.E. • ATLANTA, GA.



HOME & FARM FREEZERS



Sept. Freezer Sales by NEMA Firms Hit 58,140; Nine-Month Total Is 686,822

Summary for September and First Nine Months, 1953

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen foods.

SEPTEMBER (25 Companies)

Sizes	Domestic	Canadian	Foreign	Total
1. Less than 5 cu. ft.				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 5 and 6 cu. ft.				
Chest Models	*1,271	*	*22	*1,293
Upright Models	†	†	†	†
3. 7 and 8 cu. ft.				
Chest Models	2,548	67	338	2,953
Upright Models	†	†	†	†
4. 9 and 10 cu. ft.				
Chest Models	3,901	9	92	4,002
Upright Models	†359	†19	†14	†392
5. 11 and 12 cu. ft.				
Chest Models	3,524	....	211	3,735
Upright Models	3,253	38	37	3,328
6. 12.5 to 17.4 cu. ft.				
Chest Models	21,188	410	165	21,763
Upright Models	7,555	314	101	7,970
7. 17.5 to 21.4 cu. ft.				
Chest Models	7,834	77	47	7,958
Upright Models	2,464	9	13	2,486
8. 21.5 to 30.4 cu. ft.				
Chest Models	1,150	36	1	1,187
Upright Models	‡1,066	‡1	‡4	‡1,071
9. 30.5 to 40.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	‡	‡	‡	‡
10. 40.5 to 50.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	....	....	....	....
11. 50.5 to 60.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	2	....	....	2
12. 60.5 cu. ft. and over				
Chest Models	....	....	....	....
Upright Models	....	....	....	....
Total Chest Models	**41,416**	**599**	**876**	**42,891**
Total Upright Models	**14,699**	**381**	**169**	**15,249**
Total All Models	**56,115**	**980**	**1,045**	**58,140**

FIRST NINE MONTHS (26-24 Companies)

Sizes	Domestic	Canadian	Foreign	Total
1. Less than 5 cu. ft.				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 5 and 6 cu. ft.				
Chest Models	*8,984	*174	*443	*9,601
Upright Models	†	†	†	†
3. 7 and 8 cu. ft.				
Chest Models	43,913	2,096	2,271	48,280
Upright Models	†	†	†	†
4. 9 and 10 cu. ft.				
Chest Models	34,020	234	846	35,100
Upright Models	†15,625	†471	†393	†16,489
5. 11 and 12 cu. ft.				
Chest Models	58,487	3,262	1,220	62,969
Upright Models	64,068	1,858	602	66,528
6. 12.5 to 17.4 cu. ft.				
Chest Models	215,388	7,780	932	224,100
Upright Models	42,954	791	639	44,384
7. 17.5 to 21.4 cu. ft.				
Chest Models	101,614	2,384	382	104,380
Upright Models	43,288	736	151	44,175
8. 21.5 to 30.4 cu. ft.				
Chest Models	16,461	435	36	16,932
Upright Models	‡13,774	‡91	‡7	‡13,872
9. 30.5 to 40.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	‡	‡	‡	‡
10. 40.5 to 50.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	....	....	....	....
11. 50.5 to 60.4 cu. ft.				
Chest Models	....	....	....	....
Upright Models	8	....	....	8
12. 60.5 cu. ft. and over				
Chest Models	....	....	....	....
Upright Models	4	....	....	4
Total Chest Models	**478,867**	**16,365**	**6,130**	**501,362**
Total Upright Models	**179,721**	**3,947**	**1,792**	**185,460**
Total All Models	**658,588**	**20,312**	**7,922**	**686,822**

*Chest models for items 1 & 2 combined because of possible disclosure of individual company data.

†Upright models for items 1-2-3-4 combined because of possible disclosure of individual company data.

‡Upright models for items 8 & 9 combined because of possible disclosure of individual company data.

Admiral Corp. (in 2-1-53), Appliance & Electronics Div.; Avco Mfg. Corp., (Crosley & Bendix Divs.); Ben-Hur Mfg. Co.; Carrier Corp.; Coolerator Co., A Div. of I.T.&T. Corp.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Masterfreez Home Locker Mfg. Co.; Maytag Co., The; Norge Div., Borg-Warner Corp.; Philco Corp., Major Appliance Div.; Quicfrez, Inc. (formerly Sanitary Ref. Co.); Revco, Inc.; Seeger Refrigerator Co.; Servel, Inc. (in 3-1-53); Victor Products Corp.; Westinghouse Electric Corp.; Wilson Refrigerator, Inc.; Schaefer, Inc. & Emil Steinhorst & Son, Inc.

Storing Color Film In Freezer Boosts Sales

DETROIT — Another application has been found for the home freezer—storage of commercial color film.

First installation in this area is a 20-cu. ft. Crosley upright in the store of Garrick Photo Supply, largest independent photographic supply house in Detroit.

Here Ektachrome sheet film, the type of color film used by professional photographers, is held at 0° F., which more than doubles its life and assures correct color balance.

"This film is very sensitive to moisture and heat," points out Marvin R. Garrick, partner in the business along with his father, Sam, and brother, Harris.

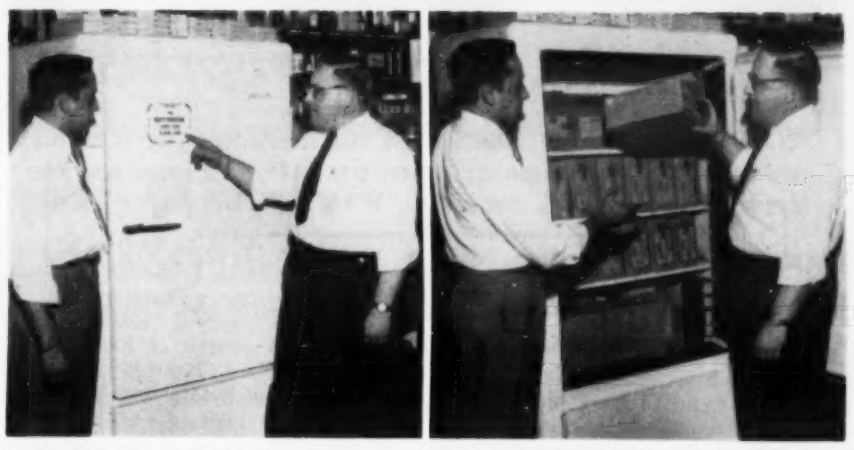
"It contains several layers with dyes which are affected by changes in heat. If the film has been mishandled by being exposed to excessive heat, the photographer may not get true colors."

Although the film itself is fairly expensive, the main problem here is a spoiled picture, he explains.

"If an automobile company, for example, is taking color pictures for advertising purposes, it means a great expense in hiring models, setting up the scene, etc. If the picture is bad because the color film was mishandled, all this is wasted.

"Some of the photographic crews that take automobiles to Florida for pictures will freeze their color film after shooting and send it back to Detroit for processing packed in dry ice."

Because of its sensitivity to heat, Ektachrome is dated for only six months, compared to a year or more for the smaller size Kodachrome used by the average amateur color photographer.



SIGN ON 20-cu. ft. Crosley freezer in store of Garrick Photo Supply reads, "All Ektachrome Sheet Film Stored Here." Harris (l.) and Marvin Garrick report a boost in sales because professional photographers know that storage of expensive color film at 0° F. insures correct color values will be maintained.

Freezing the Ektachrome, however, gives it a useable life of a year, Garrick indicated. The freezer also lets Garrick stock three times as much of this film as previously.

The film cannot be used immediately after it's taken from the freezer, but has to warm up to room temperature. This generally takes about three hours, and can't be rushed by heating, Garrick said, without danger of damaging the color dyes in the film.

Because some photographers may get emergency calls for color shots, Garrick always has a few packages of Ektachrome outside the freezer ready for immediate use.

There has been some thought given to keeping this film in a refrigerator instead of a freezer, but the possibility of damage from moisture has led Eastman Kodak, the film manufacturer, to recommend freezing the film at 0° F., Garrick said.

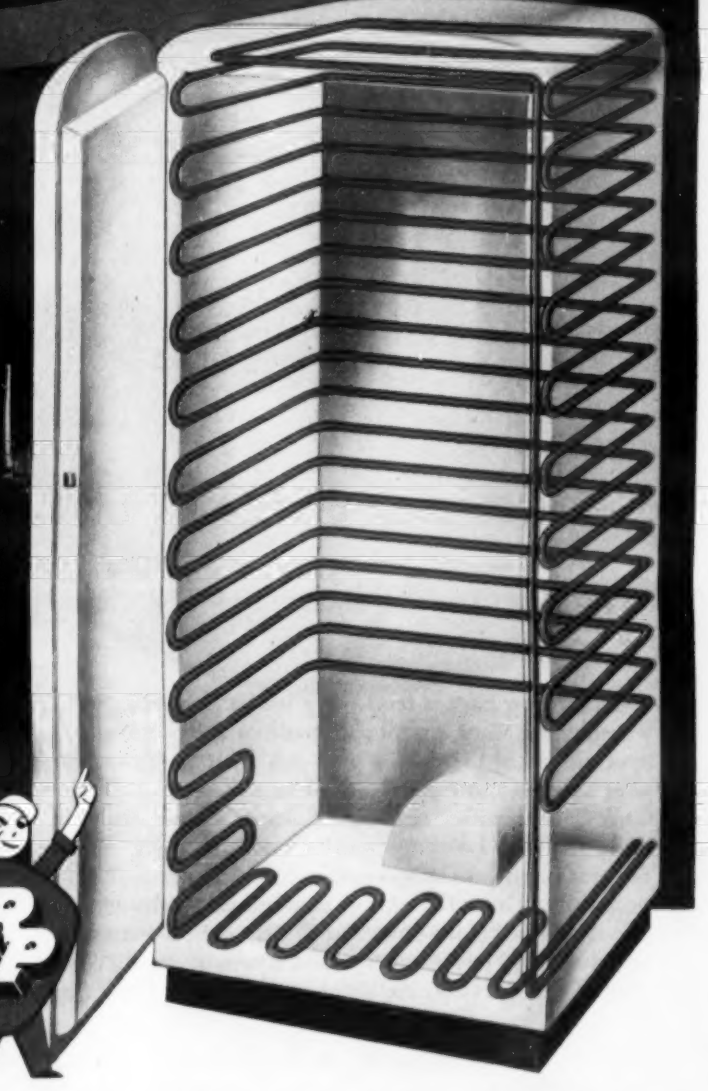
The freezer is directly behind the counter of the store in full view of customers.

"Our sales have jumped considerably since it was installed," Garrick said, "and it gives us another advantage, too. If a photographer's color picture is 'off,' he can't blame us now because he knows we've stored it under optimum conditions.

"In fact, this freezer is the smartest investment we've made in several years."

30% MORE STORAGE SPACE ...YET NO INCREASE IN CABINET SIZE

Seeger CHOOSES GM STEEL tubing FOR VERTICAL HOME FREEZER UNIT



● NO JOINTS

Less Chance of Leakage
Lower Cost

BY DESIGNING an entirely new type of continuous condenser coil that permits the use of a much thinner cabinet wall, Seeger engineers have given their new vertical home freezer unit *30% greater storage space*—at *no increase* in *cabinet size!*

To form each coil requires more than 150 feet of GM Steel Tubing . . . which Rochester Products provides in *one continuous length,* complete with all serpentine bends. The advantages are quickly apparent. Since *no joints* are needed, there is a substantial saving in cost and much less chance of leakage.

This is just one more example of how GM Steel Tubing is helping refrigeration and air conditioning manufacturers to build *better products faster* and at *lower cost.* What about *you?*

SEND FOR FREE BROCHURE

or see 1a Ro Sweet's 1954 Product Design File

Entitled *Better Products for Greater Progress,* this new, illustrated, fact-packed brochure tells how GM Steel Tubing can help solve design and production problems. Send for your free copy today.

RP STEEL TUBING

ROCHESTER PRODUCTS, DIVISION OF GENERAL MOTORS, Rochester, N. Y., U. S. A.

Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

'Calcium Chloride In Refrigeration' Revised

——KEY NO. O-1210——

NEW YORK CITY—Solvay Process Div., Allied Chemical & Dye Corp. has announced a new expanded and revised 64-page edition of its Technical & Engineering Bulletin No. 4—"Calcium Chloride In Refrigeration."

This sixth edition contains many revisions and additions, including tables, graphs, and a new section giving specific data on various industrial and commercial applications of calcium chloride refrigerating brines. Copies are available without charge.

UsAirco Issues Technical Bulletins on Coils

——KEY NO. O-1211——

MINNEAPOLIS—Four new two-page, two-color technical bulletins describing the UsAirco water, blast heat, refrigerant, and steam distributing tube coil lines have been issued by the United States Air Conditioning Corp. here.

Bulletin No. 65C covers UsAirco blast heat coils, designed for heating, drying, tempering, and other applications where high or low pressure steam is the source of heat. These are supplied in 19 different pipe tapping arrangements and a variety of sizes.

Bulletin No. 66C presents a description and specifications of UsAirco steam distributing tube coils, for use in heating applications where the steam supply is modulated. This equipment is built in five capacity series, providing a selection to meet any requirement.

Bulletin No. 67C deals with UsAirco extended surface coils for cooling and heating with water. This equipment is available in eleven standard nominal header lengths from 12 to 48 in., with any tube length from 1 to 10 ft., and can be supplied with 1 to 12 rows of tubes in depth. Bulletin No. 69C describes UsAirco direct expansion coils for use with "Freon" or similar refrigerants. These high efficiency extended surface plate fin coils are designated DX and are available in 11 standard nominal header lengths from 12 to 48 in., in any tube length from 1 to 10 ft. and 1 to 8 rows of coils in depth.

Roll-Formed Shapes Production Described

——KEY NO. O-1212——

LOUISVILLE, Ky.—Production of aluminum roll-formed shapes, ranging from television antenna tubing to parts for trucks and trailers is described in a booklet published by Reynolds Aluminum Fabricating Service, which is available without charge.

The publication explains the advantages of continuous roll-formed shapes. The process makes available an extremely wide variety of cross-sectional shapes rolled from flat or coiled strips in any length required. Dimensional accuracy, better finishes, and flexibility of design are emphasized as paramount advantages to manufacturers.

Liberally illustrated, the booklet shows examples of rolled-formed parts produced in large quantities by Reynolds Aluminum Fabricating Service. These include storm sash sections, desk trim, and parts for clothes dryers.

The publication describes additional facilities for blanking, bending, shearing, drawing, welding, and finishing other parts produced by the Fabricating Service.

Onan Issues 'Blue Book' on Electric Generating Plants

——KEY NO. O-1213——

MINNEAPOLIS — D. W. Onan & Sons, Inc. here has issued a "Blue Book" of general information concerning the selection of engine driven electric generating plants.

The pocket sized booklet traces the history of electric plant development from early stages where storage batteries were necessary to todays' modern single-unit, engine-generator power plants.

Described in simple language are the three general groups of electric plants: alternating current (a.c.), direct current (d.c.), and battery charging. Plant operation for each type is thoroughly discussed.

The booklet reviews the three types of prime movers which furnish the mechanical power for driving the generator, namely: gasoline engine, diesel engine and gas engine. Cost of operation and installation of each type is discussed.

Differences of engine cooling are compared, starting methods are described, and a concise summary of important points to remember in selection of an electric generating plant is also included.

Catalog Describes New Bastian-Blessing Hi-Line

——KEY NO. O-1214——

CHICAGO—A 20-page catalog illustrating and describing its new line of fountain-fast food equipment has just been issued by The Bastian-Blessing Co.

Called the "Hi-Line" because practically all units are 9 in. off the floor and have working surfaces approximately 3 in. higher than conventional dimensions, the equipment also is 6 in. narrower.

Included in the Hi-Line are creamer units of 10 and 20-gal. ice cream capacities, facilities for serving hot and cold foods, storage and display cabinets, and workboards with and without dishwashing machines. Off-the-floor counters also are available.

Advantages of the new line, according to the manufacturer, are convenient operation, and easy maintenance of sanitation.

How Humidity Conditioning Aids Packaging Described

——KEY NO. O-1215——

TOLEDO—The applications of humidity conditioning to the packaging materials and foundry cupola field are presented in a new issue of *The Humidity Engineer,* published by the Kathabar Div. of Surface Combustion Corp. here.

The deterioration of packaging materials, such as cellophane, while in storage or during processing, due to exposure to extremes of temperature and humidity, has long been a serious problem.

How this problem was successfully solved by Milprint, Inc., at its West DePere, Wisconsin plant is the subject of one of the feature articles.

Another article discusses the system of moisture control for cupola operation installed by Crane Co. in its new Chicago foundry and the metallurgical advantages such control provides.

Tells How To Use Kitchen Units Outside the Home

——KEY NO. O-1216——

WARREN, Ohio—"Non-home" uses of Youngstown Kitchens equipment are illustrated in a new 24-page booklet entitled "Exciting Adaptations."

Composed mainly of pictures, the booklet points out that "because steel units can be arranged to fit kitchen plans of any size," the equipment is adaptable for schools, hospitals, doctors offices, churches, drugstores, and laboratories. Actual examples of these uses are shown.

The booklet further illustrates how extra storage space can be provided in a home with Youngstown Kitchens cabinets in bathrooms, attics, and basements.

There is also a section showing how to fit cabinets around room obstructions, and another on planning of snack bars and kitchen planning desks.

"Exciting Adaptations" is available from Youngstown Kitchens distributors. It carries Form No. 5059.

Calculator Computes Belt-Center Distance

——KEY NO. O-1217——

LONG ISLAND CITY—Belt-center selection for fans and compressors, determination of horizontal distances between shaft centers, and checking equipment clearances is made easy by the Korfund Belt-Center Distance Calculator developed and offered by the Korfund Co., Inc. here.

Accurate to ⅛ in., the calculator replaces the lengthy calculators previously needed by giving the desired information in easy-to-use graph form.

On the reverse side of the 8½-in. by 11-in. Calculator Sheet, is a Fan Engineering Data Sheet giving NAFM (National Association of Fan Manufacturers) and NEMA (National Electrical Manufacturers Association) data. Also included is standard nomenclature for fan width and an explanation of fan class.

Flip-Over Easel Promotes Penguin 88 Merchandiser

——KEY NO. O-1218——

DETROIT—A sales promotion kit on the Penguin 88 frozen food merchandising cabinet has been developed by Penguin Sales here.

Basic piece in the kit is a desk-top display easel with six flip-over pages. Each page focuses attention on a major advantage of the cabinet. The easel is easily carried under the arm, the company said.

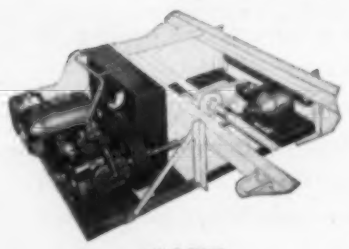
A mailing piece and a sticker seal for attaching to letterheads, envelopes, and mailings complete the kit.

Whether you have a truck or a trailer to refrigerate, whether you want a semi-automatic or fully automatic operation, Kold-Hold can give you a better answer to your refrigeration problems. The addition of Kold-Trux "Mobilmatic" Highside Units to the proven line of Kold-Hold Lowsides provides several ways to refrigerate transportation equipment efficiently and economically. Kold-Trux Units can be used with "Hold-Over," Thin "Hold-Over" or Quick Action Plates to supply completely automatic and thermostatically controlled refrigeration requiring no attention from the driver. It is driven from a live axle, propeller shaft, or power take-off and engages and disengages without shock to the engine or transmission. A specially designed "Hydro-Pack" Blower is available for use with this system in high temperature application.

For semi-automatic operation, the newly redesigned "Hold-Over" Plates can be used with a mounted compressor or make-and-break connections to maintain predetermined truck temperatures for day-long trips.

Whatever your truck refrigeration needs, you can be sure of the right answer from Kold-Hold.

Which of these methods is best for you?



KOLD-TRUX

Which do you prefer . . . Mobile or Hold-Over truck refrigeration? Kold-Hold can give you either or a combination of both.

When your weather worries start, pick out the routes with the biggest refrigeration problems and call on Kold-Hold to give you a satisfactory solution. They will give you the right combination for your needs from such highsides as the Kold-Trux Mobile Unit, a mounted compressor, or make-and-break assemblies, coupled to such lowsides as Kold-Hold Hold-Over Plates, Thin Plates, Serpentine Quick-Action Plates, or Blowers.

Why not give us the details of your problems and let our engineers find the most efficient solution for you. Write today for details.

HOLD-OVER PLATES

Tell us your truck refrigeration problems and send now for complete data and literature.

KOLD-HOLD

protects every step of the way

Division of TRAILER MANUFACTURING, Inc., 200 E. Hazel St. Lansing 4, Mich.

This new Warren model increases impulse sales... increases profits... in any size operation!

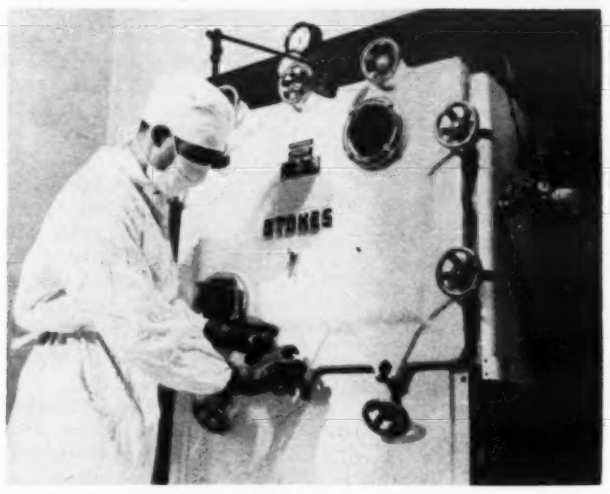
We've said before . . . "Just show him one . . . you've got a sale!" Here's another indication of the truth of that statement throughout the profitable Warren line! Warren's new *Island Merchandiser* utilizes unprofitable floor space . . . pays its way with more sales of smoked meats and dairy products. Two-ply Thermopane for sure-clear vision in display guards. For a small-space, top-notch profit maker, sell Warren's *Island Merchandiser!* Only one of the new *Super Merchandiser* line!

CHECK THESE QUALITY FEATURES

- **No plumbing**
- **Plug-in installation**
- **On casters**
- **½ HP self-contained unit**

Warren REFRIGERATORS

POST OFFICE BOX 1436 • ATLANTA, 1, GEORGIA



TEMPERATURES averaging from -40° to -70° C. are used to deep-freeze the bone grafts. The specimens are encased in a block of ice and dried in Stokes drying chambers at -40° C. Solute remains evenly distributed in bones without becoming concentrated as the frozen solvent sublimes.

Freeze-Drying Bone Grafts

Lengthens Storage, Simplifies Distribution, And Minimizes Chemical Changes

BETHESDA, Md. — Bone grafts processed by freeze-drying are being evaluated clinically at the Naval Hospital here.

Freeze-dried bone is different from frozen bone and is claimed to have these advantages:

1. Storage and distribution are simplified.
2. Storage time is probably greatly prolonged.
3. Theoretically there is less chemical change in freeze-dried bone than bone stored for long periods in freezers.

Bone grafts which are preserved by the freeze-drying method can be stored at room temperatures and may be shipped in small, easy-to-mail packages without refrigeration.

Drying of bone from the frozen state was developed by Dr. E. W. Flosdorf, director of research and development of the F. J. Stokes Machine Co. in Philadelphia, in conjunction with George W. Hyatt, LCDR, MC, U. S. Naval Medical School here.

Dr. Flosdorf has worked with the pharmaceutical industry for years on the successful preservation of blood plasma, proteins, enzymes, and vitamins by freeze-drying.

Because these biologicals have been chemically stable after drying and during seven years' storage, it was believed that bone tissue could be processed similarly and stored for subsequent grafting.

Freeze-drying is essentially freezing the bone and drying it under high vacuum.

The procedure consists of deep freezing bone grafts at temperatures averaging about -40° to -70° C. The specimens are then encased in a block of ice and dried in Stokes drying chambers at -40° C.

The solute remains evenly distributed in bones and in most biologicals without becoming concentrated as the frozen solvent sublimes. As a result the final dried bone is porous with a sponge-like structure but readily regains its normal physical properties upon the addition of water at the time of grafting.

Animal experiments conducted with freeze-dried bone at the Naval Medical Research Institute indicate that: (1) It is incorporated by the animal in a manner which is similar to fresh and frozen bone. (2) The rate of incorporation is slightly slower than that of fresh bone but may be slightly more rapid than frozen bone.

These experimental results, together with the advantages of ease of storage and shipping and potentially increased storage time, seemed to justify clinical evaluation of freeze-dried bone.

Fourteen patients have been grafted with freeze-dried homogenous grafts at the Naval Hospital, Bethesda, Md., as a clinical research project. Early results in patients are encouraging.

In one case, a young seaman suffered a broken leg in 1950. Part of the bone was lost at the time of the accident. A replacement of this missing fragment was made from the bone bank.

Pieces of his own bone and freeze-dried bone chips were used for bridging the defect. He was kept in a straight cast for about two months, later put in traction. It is expected that in approximately 18 months, after physical and mechanical therapy, he will walk again. A few years ago, the doctors would have amputated in this case.

In another case, a Korean war veteran with a bone cyst on his upper thigh, had the damaged area scraped out and replaced with bone chips from the bone bank.

He was in bed for 12 weeks. Four of these weeks were spent in a complete cast from shoulder to thigh. Two weeks after the operation he was able to put his full weight on his thigh.

Previously, the use of frozen bone grafts was standard practice in orthopedic service. But certain limitations of frozen bone became apparent.

It was noted that the handling and shipping of refrigerated bone is difficult and expensive. Further, frozen bone may have a limited storage time.

BONE GRAFTS processed in Stokes freeze-drying equipment can be stored at room temperatures and may be shipped in small, easy-to-mail packages without refrigeration.

Gross changes—discoloration, dryness and loss of elasticity—have been observed in bones stored for periods as short as three months. Bone in sealed bottles undergoes some moisture loss by evaporation.

As the frozen bone tends to dehydrate, the tissue salt concentration may be increased sufficiently to lower the freezing point of the bone below the average freezer temperature. This desiccation has a tendency to change the basic chemical properties of the protein and may contribute a retarding factor towards graft revascularization.

INDUSTRIAL *applications*

Japanese Oil Refinery To Get 2 Centrifugal Ammonia Compressors

SYRACUSE, N. Y.—Two big centrifugal ammonia compressors—believed to be the first refrigeration application of this type ever installed abroad by an American company—have been purchased for use in a Japanese oil refinery, it was announced by Carrier Corp.

Officials of Carrier said the installation will be used in removing paraffin from lubricating oils, in a process which is called MEK dewaxing.

It is the first known application of centrifugal ammonia compressors to this process. The compressor will be installed at the Nippon Petroleum Refinery, Yokohama, Japan.

"Although direct compression of ammonia by reciprocating units is common, centrifugal compression is a recent innnovation permitting considerably greater tonnages in proportion to the size and amount of equipment," Carrier said.

"Ammonia centrifugals were selected in preference to propane because of the increased efficiency of the former, and its greater availability in Japan."

The decision was made following studies by California Texas Oil Co., of which the Japanese firm is an associate, Arthur C. McKee & Co., the contractors, and Carrier. The compressors will operate between a suction pressure of 41 lbs. and a discharge pressure of 218 lbs., according to the manufacturer.

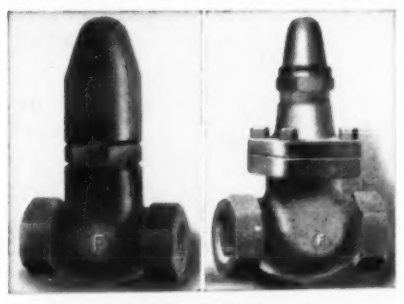
The two compressors will be driven by a 2,700-hp. condensing turbine. The base refrigeration load will be approximately 1,250 tons with additional side loads carried by the compressors at intermediate stages.

Trane Appoints Sprang to Harrisburg Sales Office

LA CROSSE, Wis. — Appointment of Edward D. Sprang to the Harrisburg, Pa. sales office has been announced by The Trane Co.

Sprang has a B.S. degree in industrial engineering from Lehigh university and is a graduate of the 1950 Trane graduate training program.

He was associated with the firm's Newark office prior to his recent service in the U. S. Army.



FRICK

Seal-cap Valves

Have all the merits of other Frick Freon and ammonia valves, including high-angle seats. Sizes ¼" to 8", screwed and flanged. See the whole series, with dimensions, weights, and prices, in Frick Catalog O: your copy in waiting.

Distributor Franchises Available

FRICK CO. WAYNESBORO, GEORGIA U.S.A.

DEAN "Job Tailored" COLD PLATES

Save time . . . save money! Any size, any shape, most metals! More and more the choice of cost-conscious refrigeration engineers. Get the full details today!

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Galveston's BUCCANEER HOTEL has Quiet Reliable Air Conditioning Control

JE

SOLENOID VALVES are the REASON!

Well known by vacationers from coast to coast is the Buccaneer Hotel on Galveston's famous beach front. The Buccaneer is noted for its fine food, easy accessibility of swimming and surf fishing.

Each modern room has radio, Television, and personalized air conditioning. Naturally JE Solenoid Valves were chosen to provide individual temperature control of each of the guest rooms.

Where quietness and reliability are important, wise contractors install JE Solenoid Valves. That's why the Southwestern Division of the York Corporation, in Houston, Texas, who designed and installed the Buccaneer's air conditioning system, chose JE Solenoid valves.

Unconditionally guaranteed for 18 months.

All JE Solenoid Valves have these five Major Features of Dependability:

- Tight Seating—no bubble tolerance
- Simplicity—only two moving parts
- Long Life—cool coils
- Durability—all corrosion-resistant material
- Opening Pressure Differential—higher than most others on the market

See your Local Refrigeration Wholesaler, or write us today for details.

JACKES-EVANS MANUFACTURING COMPANY

4427 GERALDINE AVE. • Controls Division • ST. LOUIS 15, MISSOURI

What's New

When requesting further information on new products, please use "Information Center" form.

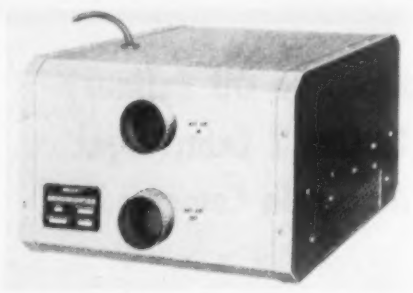
Adsorption Air Dryer Will Reduce Humidity to 8%

——KEY NO. C-1210——

CLEVELAND—A new adsorption air dryer, capable of maintaining "desert dry" atmosphere in controlled small premises, was introduced by Bryant Heater Div., Affiliated Gas Equipment, Inc., at the All-Industry Exposition here recently.

First adsorption air dryer in production, the Bryant unit will reduce relative humidity in controlled areas from as high as 90% to 8%, according to Thomas N. Gravenstreter, manager of air dryer sales.

The air dryer is plugged directly into 115 volt electric circuits. It may be controlled by a standard humidistat, and requires no drains or other connections.



In operation, the new Bryant air dryer brings in outside air, dehumidifies it, and exhausts moisture laden air from inside. Damp air passes through a bed of silica gel, trapping moisture within the particles of gel. A small electric heater continuously regenerates the gel.

In periods of high humidity, the Bryant unit will remove from the air up to 21 pints of water per day. The air dryer mechanism will not frost, and its efficiency improves as its control level is lowered, the company said.

At high levels, about 60% of the moisture in the air is removed. At low levels, more than 90% of the moisture is removed in a single air pass through the unit.

In addition to this new model (25R), Bryant now markets an extended line of atmospheric dryers which includes nine standard sizes. These remove from 21 lbs. to 12,720 lbs. of water per day. On custom equipment, Bryant air dryers will remove up to 75,000 lbs. of water per day, according to Gravenstreter.

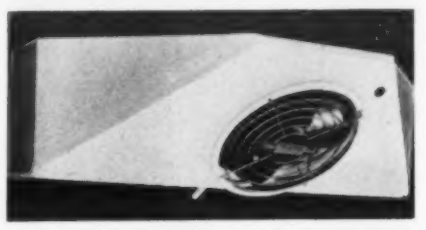
In addition to high moisture removing capacities, Bryant dryers are capable of delivering -70° F. dewpoint air, without resorting to any mechanical refrigeration. Special custom dryers will deliver even lower dewpoints with only minor changes in bed depth.

Bryant's proven rotary drying principle has been expanded so that loss of desiccant is completely eliminated.

Bryant's new industrial class equipment has been designed with virtually no price increase over previous rotary machine classes, size for size.

Stop service calls . . . keep out rust and sludge . . . open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

Filtrine MANUFACTURING CO. BROOKLYN 38 • N. Y.
"Water Coolers and Filters for 40 Years"



Kramer Wedge Designed As Compact Space-Saver

——KEY NO. C-1211——

TRENTON, N. J.—A new refrigeration product, the Kramer "Wedge," has been announced by the Kramer Trenton Co. of this city.

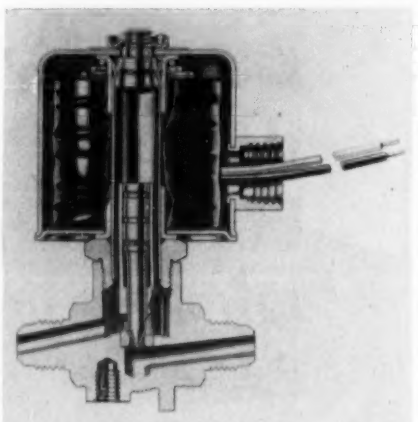
The new "Wedge" has been designed primarily for reach-in refrigeration boxes as a compact space-saver.

According to the manufacturers, the unit was designed and engineered for maximum efficiency and as a solution to many coil space problems. It takes up no more height than an ordinary milk bottle. Only 8½ in. high, its wedge shape permits maximum use of shelving. It is designed for standard shelving and eliminates the need of any special cutouts.

Complete with built-in heat exchangers, the new unit is finished in white enamel to blend with refrigeration box interiors. Since the cold air travels down the back wall of the fixture, eliminating cold blasts against doors, it reduces sweating to minimum, it is said.

Available in four sizes, the "Wedge" has a B.t.u./hr. capacity of 1,030 to 5,600 B.t.u.'s.

A-P Controls Improves Model 73 Solenoid Valve



——KEY NO. C-1212——

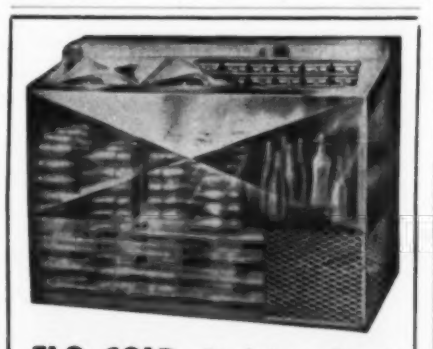
MILWAUKEE—Available in three orifice sizes and in four body styles, an improved model of its model 73 solenoid valve has been announced by A-P Controls Corp.

The new models incorporate double-dipped, varnish-impregnated coils to assure efficient performance under extreme humidity conditions, according to the company. The coil is easily changed to suit voltages required.

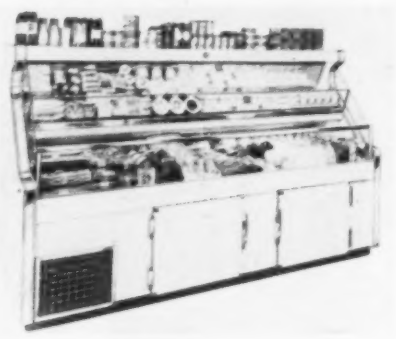
A unique feature is an electrical data plate which accompanies each interchangeable coil. When a coil is changed, the new plate is fastened under the coil cover nut, so identifying data is always correct.

The coil cover is held with one nut, and can be rotated through 360°, to simplify electrical connections.

Designed for use with any non-corrosive liquid and for refrigerants or air, the valve may be obtained in three orifice sizes—$\frac{5}{32}$ in., $\frac{3}{16}$ in., and $\frac{7}{32}$ in., and for $\frac{3}{8}$ N.P.T., $\frac{3}{8}$ in. flare, and $\frac{3}{8}$ in. or $\frac{1}{2}$ in. sweat connections.



FLO-COLD *Stainless Steel*
DRINKMASTER
ICE CUBER-COOLER
Now Also Made in ALUMINUM
"A Case of Cool Judgment"
United Friguator Engrs.
Menominee, Mich.



96-In. Self-Service Case Designed for Small Store

——KEY NO. C-1213——

BALLY, Pa.—A 96 in.-long self-contained, all-purpose display case has been introduced by the Bally Case and Cooler Co. here to meet the need for a larger size self-service case in small stores.

This case is a companion to the Bally "Servicold 60," a 60-in. self-service case developed earlier this year for the "ma and pa" store having limited floor area.

Like the "60" case, the Bally Servicold 96 is designed to self-serve dairy products, fruits and vegetables, meats, delicatessens, candy, baked goods, etc. It is equally useful in large food and meat markets and drug stores.

The Servicold 96 offers 24.4 sq. ft. of display area. It is equipped with a roomy main shelf and a refrigerated mezzanine shelf for extra display. Merchandise displayed is reflected by a lifetime copper-back mirror angled to catch the eye. The case is 96 in. long, 35½ in. deep, and 56¼ in. high.

A 16-cu. ft. refrigerated compartment in the lower section of the case provides storage space for extra supplies of all types of perishable foods and merchandise.

Despite its size and capacity, the 96 is easy to install. Its 35 in. depth permits passage through the narrow doorways of small stores.

The finish on the Bally case is white acid-resistant porcelain reported never to turn yellow or peel.

A ¾-hp. noise-free hermetic compressor with capillary tube built in the case provides power for the unit.

WATCH THE NEW QUIET KOOL

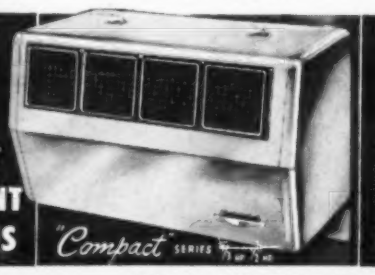
QUIET KOOL — the name that spells QUALITY and PROFITS does it again! Brings you the most sensational development in year 'round AUTOMATIC THERMOSTAT CONTROLLED air conditioning at a

PRICE BELOW ANY OTHER NAME BRAND!

★HIGH-POWER COOLING CAPACITY assured by dependable TECUMSEH sealed-in motor compressor
★4-WAY ADJUSTABLE GRILLES in contrasting high-impact plastic . for draft-free air control.
★FAMOUS DESIGNER STYLING contemporary design in harmonious colors. hinged grille conceals WEATHER SELECTOR controls.
★'SNOWFLAKE' QUIETNESS completely insulated with rubber mounted motor

These are some of the outstanding features that make 1954 QUIET KOOL the fastest selling . . . . . the most amazingly priced air conditioner today!

Another Exclusive! NEW ACCESSORY KIT Solves CASEMENT INSTALLATIONS



"INSTALL IT YOURSELF" ACCESSORY KIT makes easy REGULAR WINDOW INSTALLATIONS

MAKE 1954 YOUR BIGGEST YEAR, MR. DISTRIBUTOR!! Team up with the QUIET KOOL complete line . . . the year 'round air conditioner with the built-in consumer acceptance . . . . Choice territories still open . . . Write today for complete details!

QUIET KOOL ROOM, RESIDENTIAL and COMMERCIAL AIR CONDITIONERS . . . products of
QUIET KOOL CORPORATION 46 OLIVER ST, NEWARK N.J.
subsidiary of QUIET-HEET MANUFACTURING CORP. 'World's Largest Oil Burner Manufacturer'

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

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Key No. ..... Key No. .....
Key No. ..... Key No. .....
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What Was New

At the All-Industry Show

NEW 5-TON EVAPORATIVE CONDENSER with the fan in the dry air stream has been returned to the Drayer-Hanson line, George Morton, (r.) president of Drayer-Hanson, Inc. tells Howard J. Rosen of RoCo Equipment in New Orleans.

SECTIONAL WALK-IN COOLERS, in both wood and metal exteriors, along with a self-contained "plug-in" refrigeration system for such coolers (at left) were displayed by the Marby Co.

THIS REDMOND CO. DISPLAY shows application of company's Type AY "Tri-Flux" six-pole shaded-pole motor and Type BY "Tri-Flux" four-pole shaded-pole motor. Taking a close look at the latter are James Pichiotino, specifications supervisor of Redmond, and Carl J. Roethel, Commercial Distributing Co., Salt Lake City.

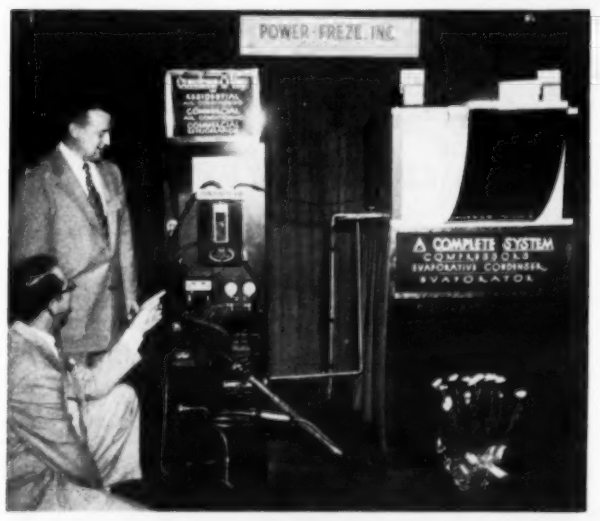
IN THE BOOTH OF Superior Valve & Fittings Co., features of the company's snap-action charging line valve are described to Walter J. Martowski (right), owner of Marty's Carbonator & Refrigeration, Ludlow, Mass., by David G. Dodds, Jr., Superior New York and New England sales representative.

PAT COOLEY, executive secretary of the Refrigeration & Air Conditioning Contractors Association of Richmond, Va., accepts invitation of Earl W. Bailey, president of Carbonic Dispenser, Inc., to get a refreshing drink from company's "Sodamaster" model SM3H. Single arm serves three carbonated drinks, soda water, and jet soda stream.

(Readers of AIR CONDITIONING & REFRIGERATION NEWS who wish further information on new products shown at the All-Industry Refrigeration and Air Conditioning Exposition pictured on this page may have their inquiries forwarded through the Reader Service Dept. of the NEWS.)

MODEL SC-350, one of units in United Conditioning Corp.'s 1954 line of "Clime-matic" air conditioners, is the subject of discussion here between J. R. Layton, St. Louis manufacturers' agent, and Charles A. Pfeffer, vice president of United Conditioning.

COPPER TUBING IN ANY FORM OR SHAPE DESIRED for use in refrigeration and air conditioning work was displayed in the Wolverine Tube Exhibit. In the picture (l. to r.) C. H. Kuthe, manager of product development for Wolverine, discusses some tubing matters with A. M. Post of Frank H. Grace & Co., Cleveland, and Frank Elam of Wolverine.



"CONDENS-O-VAP," a new combination compressor and evaporative condenser for residential and commercial air conditioning and commercial refrigeration, was shown in operation by Power-Freze, Inc. W. M. Sims, Atlanta sales representative, and Lester M. Maresh, application engineer of Square D Co., discuss unit features.

ADMIRING THE HOME-MADE ROOM COOLER put together to demonstrate the use of the Torrington "Airotor" blower wheel and slinger ring fan blade are (from l. to r.) Roger T. Lyman, general advertising manager for Torrington Mfg. Co.; Dick Ebbetts, Houston representative of Bush Mfg. Co.; and Gordon McGibbon of Air Conditioning Engineering Co. in Montreal, Que., Can.

NO SPECIAL WIRING! NO SPECIAL PLUMBING! ONLY ½ H. P. TO EACH CABINET!

required for this—

42 feet of Zero selling space!

$185.00 in frozen food sales per week-end day from these six new 17 cu. ft. merchandisers, reports Frank Lamfalusi, proprietor of FRANK'S SUPER MART.

Increased sales . . . compact design . . . low cost of installation and operation of GF-17's pleases Gary, Ind. super market operator. Here's what he says: *"From every standpoint—performance, economy, dependability—Kelvinator low temperature cabinets have, in my experience, been by far the best."*

102 *cubic* feet . . . 42 *lineal* feet, of *zero* selling space—plus plenty of unrefrigerated display shelf area in illuminated super-structures of these six eye-appealing, sales-attracting Acco GF-17 frozen food merchandising cabinets from Kelvinator. Compare their amazingly low cost with any other Thermopane glass front cabinet of similar size.

For full information see your local Kelvinator representative—or write Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

FRANK'S SUPER MART

5401 WEST 11TH AVENUE · GARY, INDIANA

Mr. J. A. Komar - Commercial Sales Manager
Nash-Kelvinator Sales Corporation
6700 North Lincoln Avenue
Chicago 45, Illinois

Dear Mr. Komar:

You will find enclosed a photograph of the six recently installed GF-17, Kelvinator frozen food merchandising cabinets purchased from your distributor E. J. Byman Co., Calumet City, Illinois.

I'm really proud of this handsome line-up of 102 cubic feet of zero selling space that really sells. My frozen food "department" formerly consisted of a medium size ice cream cabinet from which sales averaged $15.00 per week end day. Since installing these new GF-17s, frozen food sales have jumped to $185.00 per week end day.

In my many years of grocery merchandising experience, I have had occasion to use many makes of ice cream cabinets. From every standpoint -- performance, economy, dependability -- Kelvinator low temperature cabinets have, in my experience, been by far the best.

When the new GF-17 model was introduced, I was immediately impressed with its compact design and appearance. Installation was inexpensive because they operate on standard 110 volt current and require no special wiring or plumbing.

In my opinion the GF-17 has no equal in its size or price class.

Yours very truly,

Frank Lamfalusi

Frank Lamfalusi, Proprietor
FRANK'S SUPER MART

Get Kelvinator

The Best Known Name on Modern Frozen Food Cabinets

As Manufacturer Sees It . . .

Wholesalers Should Sell Aggressively, Have Adequate Product Knowledge, Train Entire Staff, Handle Only a Few Lines, and Resist Price Cutting

H. F. Spoehrer, Vice President, Sporlan Valve Co.

Companies who are members of ARI have one thing in common. They are either wholly or partially in the Refrigeration and Air Conditioning business. Beyond that there are tremendous differences between member companies. They vary greatly in size and they make a wide variety of products, from small fittings and accessories to large central station type systems.

Some companies distribute through wholesalers, some have their own distributor-dealer organization, and some sell direct. Therefore, no general operating rules or policies can apply to all members. What is a good policy for one company may be bad for another company. What may be good for one group of manufacturers in one product section may not be at all applicable to the manufacturers in another product section.

At a meeting of this kind, therefore, it is impossible for one individual to speak for any other company or group of companies. I, therefore, am not representing ARI or any product section or any group of manufacturers. I am here as an individual giving you my own ideas and opinions. I can speak for my own company.

I have been asked to give you my ideas on how wholesalers can best represent the manufacturers for whom they sell or what the manufacturers can expect from a good wholesaler. I am sure that you will not find too many new ideas in what I have to say since this subject has been discussed many times in the past. However, I have assembled a number of points on the subject, which, to me, seem pertinent.

Lack Aggressiveness

One of the most common complaints heard from most manufacturers is that the wholesaler is not agressive enough—he doesn't go out and really sell. You've got to sell, sell continuously. Of course, it is a matter of working together at all times for mutual benefit. Whatever a wholesaler does for the benefit of the manufacturer he represents should result in immediate or future benefit to the wholesaler.

I believe for a wholesaler to do an effective job he should handle only one or two competitive lines, rather than to handle several lines. As far as some products are concerned one make should be adequate, whereas in the case of some other products it may be necessary to carry two makes in order to get complete product coverage. To handle more makes of a given product leads to inefficient operation and eventually reduced profit. A wholesaler cannot adequately stock everybody's line. This is really not necessary because if he is careful in the selection of his lines he should be able to take care of his customers and prospects through salesmanship and service.

Knowledge of Products Is Vital Factor

It is essential for the wholesaler and his organization to have a thorough knowledge of the products he is handling. This should include a knowledge of construction details, proper application of the product, performance data, as well as sales features.

Wherever possible he and the numbers of his organization should visit the plants of the manufacturers to see how the products are made and tested. With this complete knowledge he can better serve not only his manufacturers but also his customers as well.

I can't emphasize too greatly the role which the wholesaler should play. He should always be *selling* the products he handles rather than merely being an order taker. An order taker often loses out when he does not have in stock the exact make or specification of product called for by his customer.

A salesman can frequently complete a sale by adapting what he does have to his customer's needs or by convincing the customer or prospect that the make he handles is as good or better than the one originally called for. To do this, of course, he must have a thorough knowledge of the features and limitations of the products he is selling.

Experienced, Trained Employes

To do a good job for the manufacturers he represents a wholesaler should have an adequate staff of experienced and trained employes. This includes stock clerks, counter salesmen, outside salesmen, engineers, and administrative employes. Of course, depending upon the size of the wholesaler's business, two or more of these functions may be carried out by one individual.

It is essential that a wholesaler maintain a representative stock at all times. This does not mean being overstocked, but the stock should be adequate and should include all sizes and types which are popular. The wholesaler should keep his stock current by selling the older items first. This means that as fresh stocks are received the newer items should be put on the back of the shelves and the older items brought to the front. All products should be as attractively displayed as possible.

Sales Literature Valuable

Manufacturers spend thousands of dollars annually for sales and service literature and for point of purchase sales help. This material should be used advantageously and should be kept in a clean place. Too often this expensive material is thrown around carelessly or is permitted to gather dust and eventually is thrown away.

Do not ask for more literature or advertising material than you can use and once you receive it be sure that you place it regularly in the hands of your customers and prospects. This promotion material can be very helpful but it is of no value stashed away in the back of your store.

It is important also that all new literature be passed along to the outside salesmen as well as to the inside personnel. Many times the outside salesmen are neglected in this respect and they are not always up on new products brought out by the manufacturer.

My next point is a controversial one. Some wholesalers feel that the manufacturer's salesman should call on the trade alone, whereas others are glad to have their own salesman accompany their manufacturer's fieldmen. My own feeling is that wherever possible the two should make calls together to obtain the most effective results.

Remember, building up the demand for a product is a mutual undertaking and usually cannot be done adequately by either the wholesaler or the manufacturer alone. There are, of course, individual cases where this is not true, but in general a more effective sales program can be developed in an area by having the manufacturer's salesman and the wholesaler's salesmen work together.

The wholesaler's man is the one who has to make follow-up calls inbetween the visits of the manufacturer's salesman and by working together the wholesaler's man will find out more about the products he is selling and also know exactly what the manufacturer's representative has told the prospect.

Suggested Prices Should Be Maintained

Manufacturers have a right to expect their wholesalers to maintain suggested resale prices. The wholesaler's margin of profit is established by the manufacturers on a basis of what the manufacturer thinks the wholesaler is entitled to. The percentage, of course, varies with the product. If the manufacturer felt that the wholesaler's margin was too great he would reduce the spread.

Everytime a wholesaler cuts prices his profit is reduced below what the manufacturer thinks the wholesaler is entitled to and needs. Cutting prices is not a smart way to obtain orders. No wholesaler has a patent on this idea. It is something that every company can indulge in and once a wholesaler starts cutting prices and the idea spreads to other wholesalers all of them lose money.

A good wholesaler will always stress the service he can render to his customers and also will stress the completeness of his stock rather than obtain business by cutting prices. Price cutting gives him only a temporary advantage over his competitors, whereas a complete stock, prompt and efficient service are things which will result in repeat business.

The sales and business policies of manufacturers vary greatly. In so far as it is possible to do so, the wholesaler should adhere closely to the policies established by the manufacturers he represents. I appreciate that some manufacturers do not tell the wholesalers their policies or if they do they may not be to the liking of the wholesaler.

The wholesaler has the right of requesting an expression of policy from the manufacturers he buys from and if the policies of a given manufacturer are not consistent with the wholesaler's ideas he certainly has the privilege of discontinuing business with that manufacturer if he cares to.

How To Handle Defective, Inoperable Material

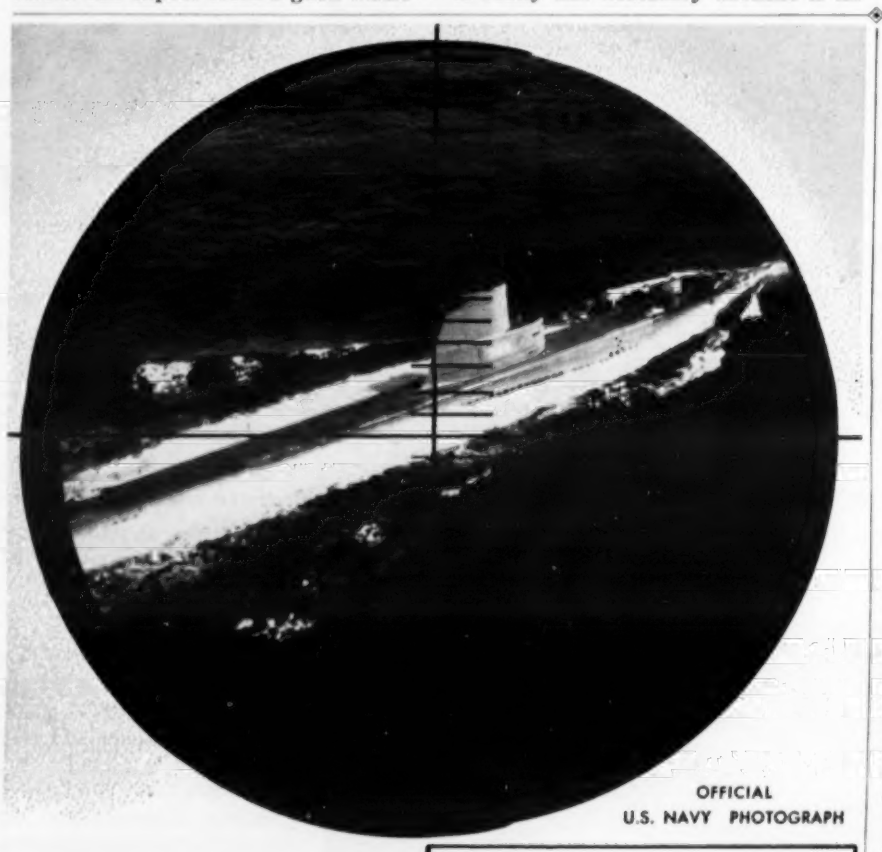
Where defective or otherwise inoperable material or equipment is returned to a wholesaler by his customers it should be returned promptly to the manufacturer with a complete report as to why the material is being returned. It is very annoying to receive material from a wholesaler for credit, repair, or replacement without any word of explanation or with some broad statement to the effect that, "it just didn't work." Most manufacturers stand behind their products and are willing to repair or replace defective material provided it is justified on the basis of the facts as shown by a complete report.

Manufacturers have their financial obligations to meet and it is essential that wholesalers pay promptly for what they buy from the manufacturers. Manufacturers should not be expected to finance the wholesaler's business by waiting several months for the payment of invoices. To pay manufacturers promptly a wholesaler should keep his business in good shape financially by watching expenses and by keeping his inventory as low as possible and yet have a representative stock of all products.

There are perhaps other things which wholesalers can do to represent properly the manufacturers whose products they handle, but I think I have covered most of the main points.

One of the most interesting sessions at the recent annual convention of Refrigeration Equipment Wholesalers Association was the one in which there was a "Wholesaler vs. Manufacturer" debate, with H. F. Spoehrer of Sporlan Valve Co. representing the manufacturers, and A. B. Schellenberg, United Refrigeration Co., San Antonio, speaking for the wholesalers.

It was not actually a debate, but rather a presentation of the manufacturers' thoughts on how the refrigeration and air conditioning supplies wholesaler could do a better job, and some suggestions by wholesalers on certain things that manufacturers could do which might help the wholesaler to do a better job. Readers who are interested in this segment of the industry's activities should find much of interest here.



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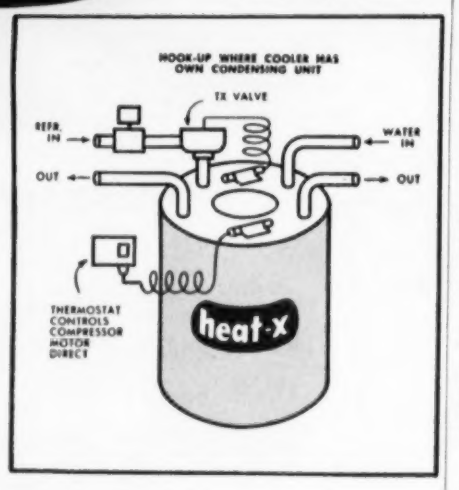
COOL DRINKING WATER UNDER THE SEA



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As Wholesaler Sees It . . .

Mfrs. Should Provide Wider Margins, More Standardization, Better Delivery, More Attention to Replacement Parts, and Aid In Protecting Inventories

By A. B. Schellenberg, the United Refrigeration Co., San Antonio, Texas

Benjamin Fairless of U. S. Steel Co. recently warned that if the prophets of pessimism were heeded, the nation could predict itself into a depression. I have no desire to contribute to any negative thinking about the future of our business. However, I can see the wisdom of a recent editorial in *Business Week* and I would like to read a part of it. Quote:

"We doubt that forecasts of gloom can, all alone, produce a depression. All those who now attack the pessimists should remember that we have been hearing their dismal predictions all through the postwar era. The batting average of the pessimists is practically zero, so that even if they happen to be right for once, it would be erroneous to credit them with being a major influence.

"What we are now witnessing is the beginning of a long expected adjustment from boom conditions. This leveling off should be cause for neither deep gloom nor blind refusal to face the facts. There may be more danger in playing ostrich than in sounding off like a cassandra.

"This is because unrestrained optimism can lead to a resistance against making changes. If businessmen hide their heads from the realities of the situation, and do not take corrective measures to adjust inventories and prices and profits, then any downturn is likely to become more painful and prolonged than need be." End quote.

Many Wholesalers Getting Only 2% Net Profit

Over the past 6 or 7 years the wholesaler's profit margin and inventory turnover have decreased at a rapid pace. The average wholesaler's net profit as a percentage of sales is less than half of what it was not too many years ago.

Today there are too many wholesalers operating on a 2% and less net profit. Granted that during these years the wholesaler's sales volume has expanded considerably, so that he has been able to maintain about the same dollar volume of profit. However, remember that his inventory has increased too and at a greater rate than his sales. Most wholesalers do not today realize the inventory turnover they did a few years ago.

Now when profit margins are small it doesn't take a very great drop in sales to materially reduce or even wipe out net profits. When inventories are large it doesn't take much of a sales decrease to freeze solid a wholesaler's liquid working capital.

In the interest of keeping the wholesaler healthy no matter what economic climate lies ahead of us, I have placed the wholesaler's complaints into two groups—those bearing upon his profit margin and those affecting his inventory turnover.

Let us first consider those factors with a direct bearing on profits.

Margins Reduced

The cost of doing business has been steadily rising and as a result manufacturers have periodically increased their sales prices. In order to hold down the amount of these price increases to the ultimate consumer I understand that some manufacturers have manipulated discounts so that the wholesaler's margin has been reduced—that's murder.

Now it is true that as sales volume increases, distribution costs as well as manufacturing costs should drop. But even when a manufacturer permits the same percentage margin after a price increase, the net result may be a reduction in the wholesaler's profit if his sales volume is adversely affected. Many manufacturers have created increased sales volume through sales to other original equipment manufacturers—increased their volume sufficiently to overcome a drop in profit margins and to wind up with more profit.

This avenue of increased sales volume—the special products for original equipment manufacturers—is not always open to the wholesaler—not even on the normal pattern of replacement sales.

This is one of the most frequent complaints from the wholesaler.

The wholesalers maintain that manufacturers—some, that is—have different sales policies on some of their products, granting manufacturers and assemblers prices for resale to their outlets, particularly large distributors and contractors and so make it possible for the wholesaler to sell these outlets at a profit. In other words the wholesaler cannot see any business wisdom in the granting of wholesale prices to distributors and contractors.

More Standardization

The wholesaler also feels that because of frequent, generally slight, design changes in standard products to meet the peculiar requirements of each of the original equipment manufacturers—he is ruled out of this replacement market. In other words the wholesaler pleads for more standardization in the industry.

I guess that from the beginning of our industry the problem of distribution policies has been responsible for many of our complaints. The wholesaler repeatedly points out that too many manufacturers extend wholesale prices to distributors and contractors—companies which are not functioning as wholesalers—and that original equipment prices are being filtered down to dealers who should be the wholesaler's customers.

Now the good wholesaler has learned that folly of carrying too many lines of the same type of product and has learned to carefully examine the wisdom of handling but one line. The sound manufacturer has learned the folly of making everyone a wholesale distributor. He realizes that when he extends wholesale prices to fringe companies he must get a sufficient increase in sales to overcome the adverse affect upon his regular wholesalers:

He knows that sometimes merely extending lower prices will not insure his getting the business—maybe sales effort and service are what it takes. He therefore investigates first and trys to strengthen his wholesalers instead of weakening them by reducing their sales potential.

In a complex industry such as ours, where we deal with a wide variety of products, markets, and customers, distribution policies cannot be all black or all white—there is bound to be some shading. What I think the realistic wholesaler hopes for in this connection is a clear-cut statement of policy and fairly consistent adherence to stated policies.

Let us consider a few other complaints that affect profit:

Shipping Costs Up

Of those wholesalers who reported on freight and shipping costs, 90% said these costs had increased percentage-wise this year over last. Even our cost on small parcel post shipments has gone up an average of 35%. Many wholesalers feel that manufacturers' prices to them should be F.O.B. wholesalers place of business and that resale prices should reflect this increase to cover freight.

Apparently the average wholesaler's freight and shipping costs amount to 1.6% of his sales. This may sound like a small item but when net profits are only around 3%, the freight costs loom high.

Too many wholesalers mark their orders "Ship Best Way" and too few manufacturers know the best way—so shipments are made in the most convenient way—which is often the costliest way. In the case of major and repeated purchases it will pay the wholesaler to study the rate schedules and figure out the cheapest route. Then, too, perhaps there are too many shipments below the minimum weight but still costing the minimum charge. Manufacturers could save the wholesaler money by grouping shipments.

Here is a service the manufacturer's field representatives could render the wholesaler. Let him determine the cheapest way to ship and let him help group orders to save on those minimum charges. Give the shipping department the job of helping the field men—it might serve to put them on their toes, too.

Now there is a group of complaints which in addition to affecting profits also adversely affect good customer relations. Most manufacturers are interested in good customer acceptance—they want to keep architects, engineers, contractors, servicemen, and even the ultimate consumer well satisfied. Since most of these people are dealing regularly with the wholesaler it is well for the manufacturer to eliminate those minor irritations which cost the wholesaler money and make his customers mad.

Items Do Not Follow Specifications

For example, some wholesalers feel that many items sold by the manufacturer do not coincide with engineering specifications and information contained in bulletins and catalogs. The wholesaler and his customers work from this literature and mistakes resulting from mis-information usually cost goodwill and money.

The wholesaler feels that not enough attention is given by some manufacturers to replacement parts and repairs. Service materials are not available to the field without excessively long waits. Some manufacturers do not maintain parts for servicing older equipment for a sufficient length of time.

And now for the inventory problem. During World War II we developed some strange and costly attitudes about delivery promises which all too many of the manufacturers still retain. One of the most common complaints from wholesalers has to do with the unreliability of delivery date promises made by the manufacturers. Now most wholesalers understand lead time and how to order in advance—as one wrote:

"I am not interested in griping to the manufacturer on account of *slow* deliveries. It is the wholesalers function to order material based on long deliveries when they occur."

But, and let me quote another wholesaler — "Favorite Gripe" — promises for delivery from manufacturers (not all) do not seem important and are broken quite often. This causes customer complaints—high phone bills—customer looks around for competitive items. Causes inventory records to be almost useless.

We have just gone through a summer with some pretty slow and spotty delivery situations. Now is the time for both manufacturers and wholesalers to review those back orders. This is a pretty stable industry fortunately. We are not a fad fashion industry where the manufacturer whips out a large volume, sells it all to a distributing organization which sells what it can at a very decent profit and dumps the rest.

Our margin is not large enough to permit any great inventory shrinkage due to obsolesence. It is to the manufacturer's interest to help the wholesaler protect his inventory investment. In this connection the wholesaler has several suggestions:

When you the manufacturer plan a change in your product please keep the wholesalers' stock in mind. Publicity about product changes released far in advance of the delivery of the improved product makes the customer reluctant to accept the old product—makes him think the wholesaler isn't up to date or is away down on the list for attention from the manufacturer.

Sure, the manufacturer is anxious to tell about how he has corrected some difficulty or improved his product and even lets his salesmen exhibit pre-production models. However, this practice of early advanced publicity to our customers introduces an obsolesence cost to the wholesaler all the label changing and guarantee date changing cannot erase. The wholesaler is all for the progress and improvement but he would just as soon not be stuck with old models.

Another inventory suggestion: Take the wholesalers into your confidence far enough in advance of price changes so that he can protect his inventory position.

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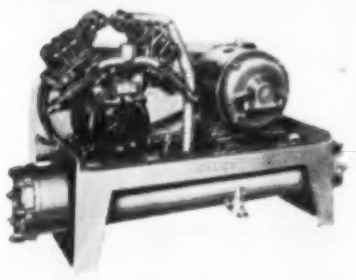

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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Thermometers In Refrigeration Service (1)

The pocket thermometer is one of the most familiar badges of the refrigeration service engineer. If you see a fellow with a couple of pocket thermometers clipped into his shirt pocket, along with some fountain pens, pencils, and a scale with refrigerant temperatures and pressures on it, he is apt to be a refrigeration service engineer.

Causing foods, beverages, water, air, and other substances to become colder is his mission, and, of course, a thermometer to measure the amount of temperature change in degrees is one of his important instruments. In many cases, probably in most cases, the thermometer is the most important gage of whether the efforts of the refrigeration service engineer have been successful or not.

Much has been said and written about the use of gages in refrigeration and air conditioning service; and rightfully so, for to the man who can properly interpret the pressures in various parts of the system, gages are indispensible in analyzing the causes of trouble.

But thermometers can also be very effective tools in refrigeration and air conditioning service. Instead of merely using a thermometer to check evaporator temperature, it can also be used to check temperatures at other parts of the system. Many times, the thermometer will tell the same story as a gage, sometimes better; and it can be used at some points in the system that do not have gage connections.

Many service engineers do not realize this, and are not taking full advantage of their thermometers. They are using their pocket thermometers to check evaporator temperatures, and perhaps condenser water temperatures, but they are overlooking many other uses of this valuable tool.

SERVICEMAN SHOULD CARRY TWO THERMOMETERS

Every refrigeration and air conditioning service engineer should carry *two* pocket type thermometers, not just one. A number of the most helpful uses of thermometers to the service engineer involve *temperature differences*—from one end of a coil to the other, for example, with one thermometer secured to each end of the coil—so two thermometers are used.

However, the two thermometers must be accurate; or at least they must read the same at the same temperature. The ordinary inexpensive pocket thermometer is often not very accurate; perhaps it may be as much as a degree or so off, either on the high or low readings.

Of course, any instrument that we use and depend on should be as accurate as is practical, and this applies to thermometers as well as gages, electric meters, scales, etc. However, in those cases in which we are mainly interested in temperature differences even more than in the actual temperatures, we can stand some inaccuracy of the thermometers, *provided*, that the two thermometers are off in the same amount and in the same direction, colder or warmer.

For instance, if both of our thermometers are accurate, and are put in brines of different temperatures, their readings will be accurate, and the difference in their reading will also be accurate.

If both of the thermometers read a degree high and are put into the same two brines, the temperature readings of both brines will be wrong but the temperature difference will be correct.

But if one of the two thermometers is accurate and the other is a degree high, then the temperature of one brine will be checked accurately, and the other a degree high; but the difference will be read as one degree more than it actually is.

Even worse, if one thermometer is one degree high and the other one degree low, the readings for both brines will be off one degree and the temperature difference will be two degrees less than the thermometers indicate.

Where temperature differences are small, as they often are in refrigeration and air conditioning work, a degree or so too much or too little can be a high percentage of the total temperature difference, and may therefore result in a high percentage of error.

So if you are to carry two thermometers to use together, see that they are accurate or at least match. Preferably they should be accurate; but if they are slightly off, make sure that they are both off in the same direction and in about the same amount.

Moreover, the accuracy of thermometer may vary somewhat over the range of its scale. It may be fairly accurate in the lower part of the scale, and be off a degree or more in the higher temperature readings; or vice versa. This is more apt to be true of the cheaper grades of thermometers.

SELECTING A THERMOMETER

A thermometer should be selected for the range of temperatures with which it is to be used. The smaller the range of the thermometer, the larger can be the degree divisions or graduations, and the more accurately it can be read. The pocket thermometer for refrigeration work is usually calibrated for temperatures of about -30° F. or -20° F. to about 120° F.

Thermometers are made in two main grades; the laboratory or standard grade, and the cheaper commercial grade. The laboratory type is usually 12 to 15 in. long, with or without a metal case. It can be obtained in a wide variety of ranges from about -150° F. to about 400° F. For best accuracy in refrigeration work, the scale range should not exceed 150° F.; that is, -150° F. to 50° F., -30° F. to 120° F., etc. The laboratory type can be obtained in one degree divisions.

The pocket thermometer is usually about five or six inches long, with a steel protective case. It is made in two grades. The standard grade is of the same approximate quality as the laboratory type, but cannot be read as accurately because of its smaller degree divisions resulting from its shorter length. The pocket thermometer is also made in the cheaper commercial grade, that may in appearance look much the same as the higher quality, standard grade.

It pays to buy a good quality thermometer even though the cost is higher. At the higher price, the manufacturer of the thermometer can take more care in constructing the thermometer, and in testing and calibrating it.

Thermometers are just like other tools; you get about what you pay for. The experienced service engineer buys tools of good quality; they cost more, but they last longer, do their job better, and save their owner time and effort.

CHECKING A THERMOMETER

If you suspect that your thermometers are not accurate, you can make a rough check that is accurate at one point but does not show whether the thermometer is accurate over its entire range. Ice, of course, melts at 32° F. (0° C.), so your thermometers should read correctly in ice water. Be sure that the ice is in small pieces such as chipped or shaved ice, and that there is a great deal of ice in the solution, not just a few pieces of ice floating around. Stir it gently and use only clean, soft water.

Hold the thermometer at the upper tip only, and keep at least about three inches of the thermometer in the ice and water solution. Read it with the bulb immersed and with the eye at the same level as the top of the column of the liquid in the thermometer. You can read a degree or so too high or too low by reading it below or above the level of the liquid in the thermometer.

An even better method is to compare your thermometers to one that is known to be correct. Some shops have a laboratory type thermometer against which they check their pocket thermometers. A laboratory thermometer is too expensive and too liable to breakage to use in ordinary service work. However, it has been individually checked, and some of them can be obtained with the inspector's certificate showing the results of the test of the thermometer against the manufacturer's laboratory standard.

The "work" pocket thermometers are checked against the shop laboratory thermometer at various temperatures by using water at various higher temperatures and brine at the lower temperatures below freezing.

(Many shops also keep a high quality "master" gage against which they periodically test their ordinary, inexpensive gages that they use in service work. This "master" gage is *never* used on machines, either in the shop or in the field, but is used only to test other gages. If necessary, the "master" gage can be sent back to its manufacturer for a recheck occasionally.)

ATTACHING THE THERMOMETER

Every service engineer should keep thermometer clamps, clips, chains, or other means of attaching thermometers to lines or other parts of the equipment. These may be bought at any refrigeration supply wholesalers, and can be worth their weight in gold, if properly used.

The thermometer should be secured to the tubing, pipe, or other part tightly enough to insure good heat transfer and quick response by the thermometer to temperature changes. On evaporators below freezing, scrape away ice or frost, when attaching the thermometer; otherwise the thermometer may read several degrees higher than the refrigerant temperature inside the tube.

It is important that the *bulb* should be in good contact with the surface whose temperature the thermometer is to indicate.

Motor men often attach a thermometer to a motor frame with putty, and this same means may be used with refrigeration equipment, such as compressor crankcases, or heads, condensers, pump housings, control bodies, etc. (Motor men often use Centigrade thermometers, so that they do not have to transpose the thermometer readings from Fahrenheit to Centigrade.)

If the air around the thermometer is very much warmer or cooler than the part to which the thermometer is attached and whose temperature you wish to determine, wrap a piece of dry cloth or dry felt lightly around the tube and thermometer bulb, in order to keep the air from affecting the reading of the thermometer.

(To Be Continued)

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IN A SHADEDCORNER behind the house is mounted an Airtemp "Water Saver" through which a mixture of Prestone and water flows in a closed circuit to dissipate the heat of the compressor to the outside air. In effect the water-cooled system wastes no water.

Water-Cooled System Wastes No Water

Prestone In System Offers Economy of Air-Cooled Unit

CHATTANOOGA, Tenn.—A water-cooled air conditioner that doesn't waste any water has been installed in a speculative six-room home constructed here by the Arc Development Co.

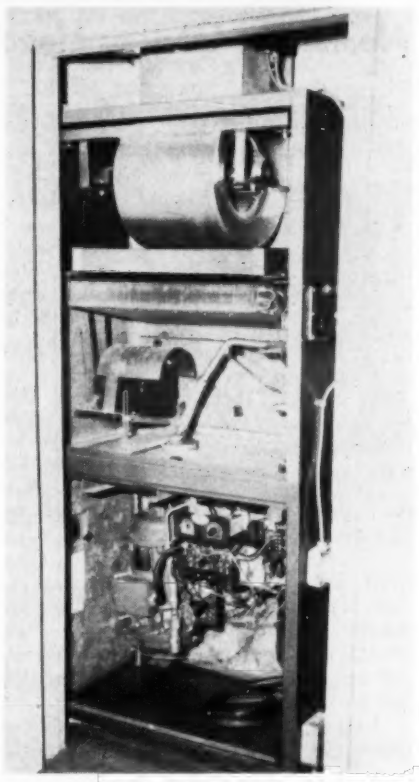
The 3-ton Chrysler Airtemp packaged unit is mounted in a hall closet close to the center of the basementless house. Ductwork is run through the attic from the unit to the various rooms served.

A. J. L. Moritz, Jr., Tennessee district manager for Chrysler Airtemp, pointed out that the installation has several interesting features.

One is the use of the Airtemp "Water Saver," which is mounted on a cement platform at the rear of the brick house. Instead of the usual water cooling system for the condensing unit where water is taken from city mains, passed around the compressor, and dumped into the sewer, this unit is cooled by "Prestone" sealed in a closed circuit.

The Prestone absorbs heat from the compressor and carries it to the Water Saver, where it gives up the heat to the outside air. Because the circuit is sealed, the same fluid is used over and over again and never evaporates, giving the same economies as an air-cooled unit.

Another feature of the unit is the use of Airtemp's new "Freon-22" compressor in a suspension mounting. The "Freon-22" compressor makes it possible for the unit to operate at higher head pressures than a "Freon-12" system, an important factor in home cooling systems.



HOUSED IN A CLOSET OFF the central hallway in an Arc Development home in Chattanooga is this 3-ton Chrysler Airtemp water-cooled air conditioning unit. Note the suspension mounting of the compressor to eliminate vibration to the house and the heating coil installed just below the blower for year-round conditioning.

The fact that the compressor is mounted in suspension rather than on the base of the unit eliminates vibration that would normally be transferred to the house, he said. There is also no need for a special foundation for the air conditioning unit. It can stand directly on the closet floor without support.

Another feature of this unit is that it contains an electric heating coil just below the blower to provide heat during the winter months. The heating coil was manufactured by the Industrial Engineering & Equipment Co., Inc. of St. Louis.

1954 Indoor Comfort Conference Dates Announced for 20 Cities by Association

CLEVELAND — Twenty cities throughout the country will play host to 1954 Indoor Comfort Conferences (application engineering schools), the National Warm Air Heating and Air Conditioning Association announced recently.

These conferences are sponsored by the association with the cooperation of the National Heating Wholesaler's Association, and conference committees from each of the cities where classes are being held.

Highlighting the two-day Indoor Comfort Conferences is information on summer air conditioning as well as further emphasis on the newer warm air heating applications.

Those attending will learn by actually working out practical problems during classroom instructions. These problems include heat gain calculations, perimeter heating and cooling applications for homes constructed on concrete slabs and having basements.

Small pipe heating and cooling applications will also be covered. Instructions in heat loss calculations will be provided for those who desire. Industry-accepted manuals and worksheets published by the Association will be used as the basis for the instruction on year-round air conditioning.

Each person attending the conference will receive a copy of the latest editions of Manuals Nos. 3, 4, 7, 10, and 11, plus all the necessary forms and plan sheets for use during class sessions.

Guy A. Voorhees, technical secretary of the Association, will instruct the 1954 conferences. This will be his eighth year as instructor for the schools during which period 82 conferences have been held with over 15,000 heating men attending.

"The purpose of the conferences," states Mr. Voorhees, "is to keep the dealers, their salesmen, designers, installers, and servicemen abreast of the many advancements being made in the warm air heating and air conditioning industry."

Personalized certificates attesting to attendance at the conferences will be given. Registration fees for these classes is $17.50 per person and includes all necessary material each student requires. A listing of the cities and dates of the 20 Indoor Comfort Conferences is given below:

St. Louis	Jan. 11-12
Detroit	Jan. 14-15
Chicago	Jan. 18-19
Cleveland	Feb. 1-2
Buffalo	Feb. 4-5
Boston	Feb. 8-9
Hartford, Conn.	Feb. 11-12
Cincinnati	Feb. 25-26
Columbus, Ohio	Mar. 1-2
Pittsburgh	Mar. 4-5
Harrisburg, Pa.	Mar. 8-9
Philadelphia	Mar. 11-12
Raleigh, N. C.	Mar. 15-16
Birmingham, Ala.	Mar. 19-20
Milwaukee	Mar. 29-30
Minneapolis	Apr. 1-2
Portland, Ore.	Apr. 8-9
San Francisco	Apr. 12-13
Los Angeles	Apr. 16-17
Denver	Apr. 22-23

Coleman 10-Mo. Sales Up, Extra Dividend Declared

WICHITA, Kans. — With consolidated net sales for the first 10 months of 1953 totalling $38,161,172, a gain of $3,949,197 over the same period in 1952, directors of The Coleman Co., Inc., have announced an extra dividend of $1 on each of the 400,000 shares of common stock.

Earnings for the same period were $2,311,055, or $5.64 per share after preferred stock dividends paid and accrued. For the first 10 months of 1952 earnings were $1,930,462, or $4.67 a share.

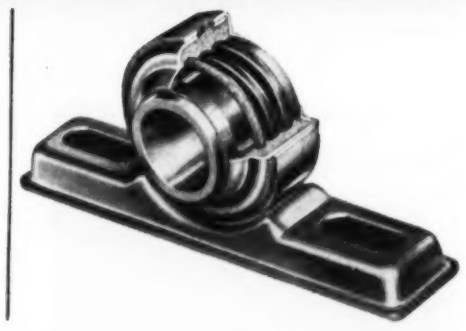
LAU

positive, self-aligning

PILLOW BLOCKS

with many unusual features

Indestructible, lightweight, oil-tight steel housing with self-lubricating bearing seat and Durex bushing. These LAU designed pillow blocks boast many, many outstanding features that provide maximum performance and long life.

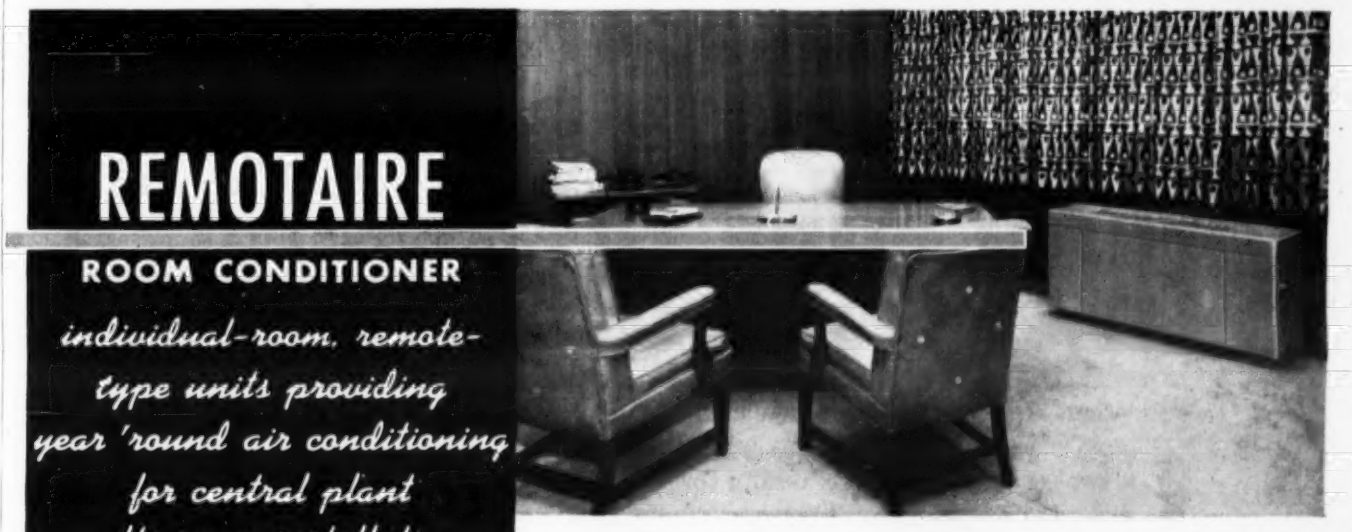


LAU PAK
Gold Seal Bearing

Requires no lubrication. An ample supply of plastic petroleum is SEALED into the housing. Nothing to compare to it for superior performance.

Write for Catalog Page 707-14

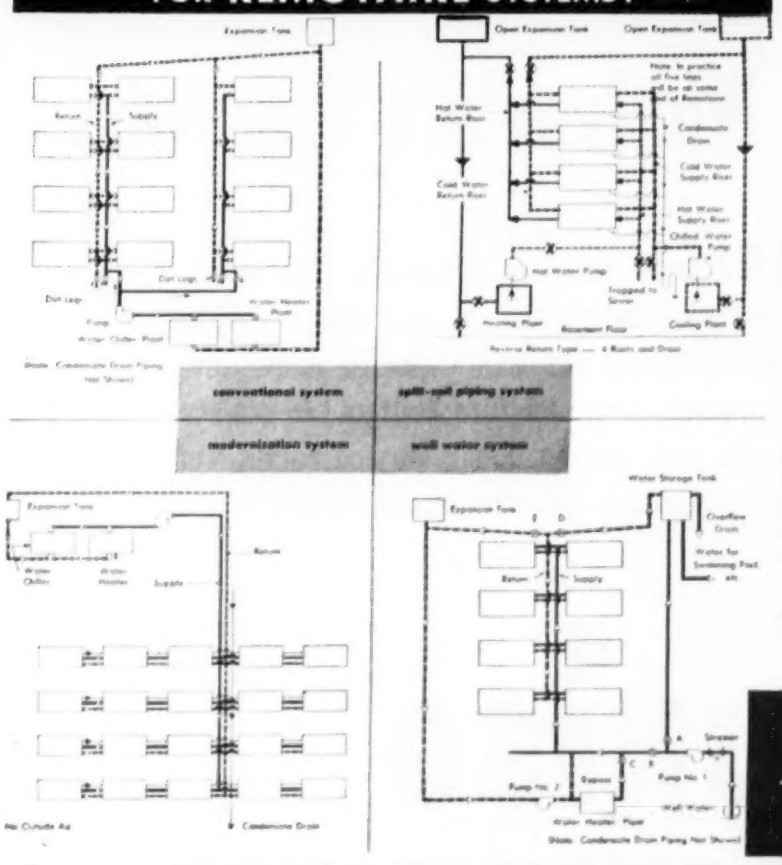
The LAU Blower Company, 2202 Home Ave., Dayton 7, Ohio
World's largest manufacturer of furnace blowers


REMOTAIRE
ROOM CONDITIONER
individual-room, remote-type units providing year 'round air conditioning for central plant multi-room installations

Adaptable to the one system that's most efficient, most economical for the job...

WALL APERTURE SYSTEM • INTERIOR VENTILATION SYSTEM • WELL WATER SYSTEM
SPLIT-COIL SYSTEM • MOTEL SYSTEM • RESIDENTIAL SYSTEM • MODERNIZATION SYSTEM

SOME TYPICAL PIPING ARRANGEMENTS FOR REMOTAIRE SYSTEMS:



● The Remotaire room conditioner heats in winter, cools in summer . . . filters and circulates the air all year 'round. Using chilled water from a central water chiller for summer cooling and hot water from a central heating plant for winter comfort, the Remotaire system provides clean, draft-free, healthful comfort-conditioning for multi-room installations such as hotels, motels, schools, hospitals, office buildings and residences.

A Remotaire system is versatile. It can be adapted to the system of air conditioning that is best suited to each building . . . new construction or modernization. Ventilation can be provided in a variety of ways . . . several methods of piping arrangements are possible. Since units can be installed free standing or recessed partially or completely, they afford wide flexibility in architectural planning.

As part of a Remotaire system, individual unit control permits each room occupant to choose the temperature that suits him best without affecting adjoining rooms. And when the unit is not in use it can be completely turned off, thereby reducing operating costs.

For further details on the various Remotaire systems, write for descriptive literature.

AMERICAN-Standard
AIR CONDITIONING

American Radiator & Standard Sanitary Corporation, Dept. AN-123, Pittsburgh 30, Pa.

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KELVINATOR BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS

Appliance, Commerical Parts Wholesalers' Sales Gain In 1st 9 Mos.

Sales

Kind of Business and Geographic Division	Per Cent Change —Sept. 1953— from Sept. 1952	from Aug. 1953	9 mos. 1953 from 9 mos. 1952	Sept. 1953 Panel No. of Firms Reporting	Reported Dollar Values (add 000)
Appliances and specialties wholesalers	+ 1	+23	+10	102	26,110
New England	+ 3	+26	+20	9	2,337
Middle Atlantic	+ 3	+33	+11	22	10,287
East North Central	+19	+33	+19	17	4,520
West North Central	+25	+ 2	+23	9	1,311
South Atlantic	—16	+20	+ 4	20	3,635
South Central	—13	— 7	+ 1	10	1,396
Mountain	— 8	+14	+ 5	6	810
Pacific	—11	+ 5	+ 3	9	1,814
Refrigeration equipment, parts (com'l)	+ 8	— 6	+15	76	2,193
Middle Atlantic	+20	— 2	+17	14	716
East North Central	+21	— 6	+ 9	18	288
West North Central	+ 6	+13	+25	5	236
South Atlantic	+ 1	— 8	+16	24	611
West South Central	+20	—19	+14	4	143
Pacific	—19	—23	+ 5	10	163

Inventory End-of-Month (At Cost)

Kind of Business and Geographic Division	Per Cent Change —Sept. 1953— from Sept. 1952	from Aug. 1953	Sept. 1953 Panel No. of Firms Reporting	Reporting Dollar Values (add 000)
Appliances and specialties wholesalers	+40	+ 1	82	28,961
New England	+39	— 3	6	1,848
Middle Atlantic	+41	+ 3	17	9,178
East North Central	+44	— 5	11	4,243
West North Central	+30	— 1	8	2,038
South Atlantic	+61	— 1	19	5,656
South Central	+15	+14	8	2,202
Mountain	+37	+ 3	6	1,639
Pacific	+20	0	7	2,157
Refrigeration equipment, parts (com'l)	+ 6	+ 1	66	4,242
Middle Atlantic	+ 3	0	11	966
East North Central	+11	0	13	657
West North Central	— 9	+10	5	419
South Atlantic	+13	— 1	24	1,543
West South Central	*	*	*	*
Pacific	+ 2	+ 2	9	419

*Insufficient data to show separately

Sept. Inventories Rise over August, Like '52 Period

WASHINGTON, D. C.—Sales gains failed to keep up with inventory gains during September for appliances and specialties wholesalers, a report issued recently by the U. S. Bureau of the Census indicates.

The report said that their September sales were 1% higher than in September, 1952, while comparable inventories were 40% higher. Sales were 23% better than in August, however, and inventories rose only 1%. For the first nine months of the year, sales were 10% over the like period in 1952.

Commercial refrigeration equipment and parts wholesalers reported September sales 8% higher than last year but 6% behind August. For the first nine months sales were up 15% over 1952. September inventories were 6% greater than last year and 1% larger than in August.

Clothier No. Calif. Branch Moves to Bigger Quarters

LOS ANGELES—Van D. Clothier, Inc., west coast representatives of Wolverine Tube Div., Detroit, has moved its northern California branch to new and larger quarters at 19 South "B" St., San Mateo, Calif.

The announcement was made by Clothier, president, from the company's headquarters in Los Angeles. John A. Marshall will continue as manager of the northern California operation.

Bush Expands Product Development Program, Names Dr. Ghai as Head

WEST HARTFORD, Conn. — Expansion of Bush Mfg. Co.'s product development program has been announced by Cecil Boling, president.

Dr. M. L. Ghai

Research and experimentation by Bush on basic heat transfer problems also will be extended, Boling said.

Heading the concern's increased efforts in this direction will be Dr. M. L. Ghai, who has been appointed director of research and development.

Prior to joining Bush, Dr. Ghai was assistant director and chief of the Heat and Power Div. of the National Physical Laboratory in New Delhi, a laboratory which corresponds to the National Bureau of Standards in Washington, D. C.

Before that, he headed the heating and air conditioning research department of Pullman-Standard Car Mfg. Co., Hammond, Ind., where he developed a new refrigeration cycle for air conditioning railway cars and guided research on new heating methods.

Born and brought up in India, Dr. Ghai is a graduate of Benares university with a B.S. degree in mechanical and electrical engineering. He also holds a final grade diploma from the City and Guilds college, London; an M.S. degree from Northwestern university; and a doctorate in mechanical engineering from Illinois Institute of Technology.

Author of numerous scientific papers and holder of several patents, he was one of 30 scientists invited to participate in recent deliberations concerning the future of solar energy. Among his inventions is a stove using only solar heat, a product now being commercially produced in India.

Central System vs. Room Units On Cleveland ASRE Program

CLEVELAND—A symposium by members on residential air conditioning, central system vs. room conditioners, has been scheduled for the December meeting of the Cleveland Chapter, American Society of Refrigerating Engineers.

The meeting will be held at the Cleveland Engineering Society building, East 19th St. and Carnegie Ave., on Tuesday, Dec. 15, with a dinner get-together at 6 p.m. and the regular business meeting and program at 8 p.m. All interested engineers are invited.

General Electric Adopts Home-Heating Control Service-Exchange Plan

SCHENECTADY, N. Y.—A service and exchange plan for franchised distributors of G-E automatic home-heating controls has been announced by General Electric Co. to cover all such controls manufactured by its Appliance Control Dept.

The plan, inaugurated as part of the company's entry into the domestic heating control market, is intended to give distributors lower overhead, faster turnover, and better customer service.

For dealers, the exchange plan is designed to increase customer satisfaction by giving immediate, on-the-job service and eliminating callbacks. By keeping a set of controls in his service truck, the dealer can install a new control and return the inoperative unit to his distributor.

Controls accumulated by the distributor are shipped to the G-E plant at Morrison, Ill. Reconditioned controls are shipped back to him freight prepaid.

For this exchange service the dealer pays rebuilt prices established by the distributor or nothing at all, depending on the length of time the replaced control has been in service (in-warranty or out-of-warranty). He knows in advance how much he will pay the distributor for each control exchanged and consequently can always tell his customer the exact cost.

Replacement heating controls carry the same warranty as new controls.

Hailey Represents McQuay In Kansas, Missouri Area

MINNEAPOLIS—J. E. Hailey of Kansas City, Mo. has been named as the new refrigeration products representative for McQuay, Inc. in the Kansas-Missouri territory, it is announced by A. B. Bayer, manager of McQuay's refrigeration department.

J. E. Hailey

Hailey, a graduate mechanical engineer, was recently associated with Central Supply Co. in the heating and air conditioning division, and before that was with the J. E. Hurston Co. of Memphis.

DOES CLEANING A STRAINER REALLY CURE THE TROUBLE?

When "no refrigeration" is caused by a sludge-clogged strainer, the cure is pretty obvious. But every time you clean the strainer and then let it go at that, you're asking for trouble. It's like fixing a punctured inner tube without pulling the nail out of the tire. You've taken care of the trouble for a while, but it won't be long until the same thing happens again.

Whenever you clean or replace the strainer, the safe thing to do is recharge the system with fresh refrigerant and clean oil. After all, the best refrigeration oil costs less than the oil you change every 1000 miles in your car.

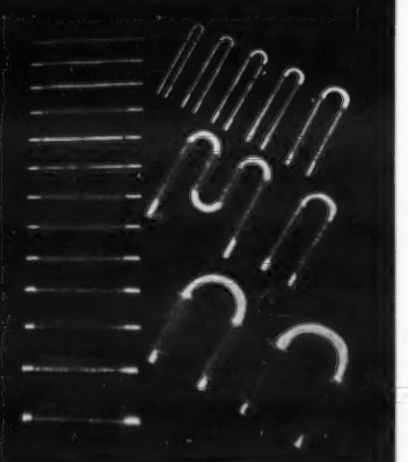
The best way to avoid sludge problems is to recharge with Suniso . . . the refrigeration oil that is used and recommended by most refrigeration manufacturers. Because its quality is controlled from crude oil to can by Sun Oil Company, you can be sure it will always give you the same trouble-free performance.

Sold by Leading Wholesalers Everywhere

SUNISO ADVANTAGES • provides adequate lubrication at all temperatures encountered in service • possesses a high degree of stability • won't throw out wax deposits under low temperatures • has extremely low moisture content • resists formation of corrosive acids and carbon under service conditions • separates readily from refrigerant—won't react adversely

SUNISO
REFRIGERATION OIL
A PRODUCT OF SUN OIL COMPANY

RO-FIN TUBES
Ideal Surface for Heat Transfer



Over 100 sizes in production!
ROME
TURNEY RADIATOR COMPANY
222 Canal St. • Rome • New York

Tenney's on the Move!

. . . with top-flight refrigeration equipment like this unit cooler—backed by the finest engineering and a fair, rock-solid distributor policy.

Interested . . . ?

Talk it over with

Tenney
ENGINEERING, INCORPORATED
Newark, New Jersey

Cory To Show Its '54 Sales Plans At 5-Day Conference In Chicago

CHICAGO—During a five day national sales conference in Chicago, Cory Corp. will unveil its 1954 sales, advertising, merchandising, and sales promotion plans and programs to its 50 territory managers and division sales managers.

All key production, administrative, sales, advertising, and service executives from Cory's Chicago home office will participate in giving an intensive four-day training program to bring the Cory sales force up to date on new product plans and forthcoming merchandising and sales programs.

The conference opened on Sunday afternoon, Dec. 6, and will continue through Dec. 10.

At this meeting, the complete advertising and merchandising campaign behind the new 1954 Fresh'nd-Aire "Electromagnetic" pushbutton automatic all-season air conditioner will be introduced to the sales staff.

Personnel will be familiarized with every important feature of the product and thoroughly acquainted with it from the standpoint of design and engineering advances through sales and field service plans.

Although the maximum portion of the sales meetings will be devoted to the air conditioners, next year's Cory and Nicro planned promotional efforts will also be reviewed and discussed.

Immediately after this national sales conference, Cory divisional sales directors and the territory managers will start a sustained coast-to-coast drive to introduce the new air conditioner to distributors and dealers.

In anticipation of a short supply of electric room air conditioners by manufacturers during the 1954 air conditioning season, Fresh'nd-Aire Co. has already started full scale production on its units and will have first models coming off the assembly line and ready for shipment prior to Jan. 1.

"We have no way of knowing," says J. W. Alsdorf, Cory president, "as to whether or not our 1954 production will be adequate to take care of all orders received from Cory and Fresh'nd-Aire distributors.

"We will operate, therefore, on a policy whereby a priority number will be assigned to all orders and the first orders received will be first orders shipped. It is advisable, therefore, for distributors and dealers to anticipate seasonal requirements just as soon as possible and to place orders to cover such requirements."

Fresh'nd-Aire also announced a new warehousing and dating program for distributors and a plan for prepayment of freight into warehouse locations of stocking distributors.

Under this plan, distributors will be shipped Fresh'nd-Aire air conditioners as they come off the production line, and will be extended seasonal dating privileges to pass along to dealers as a means of enabling them to have units in stock and available for immediate local delivery when the hot weather rush begins.

The company's extensive air conditioner advertising and sales promotion program calls for consistent consumer and trade advertising in more than 50 publications, a pre-planned month-by-month sales promotion and direct mail campaign which will reach over 100,000 prospective dealers throughout the United States, and sales helps including cooperative advertising, point of sale display, direct mail tie-in pieces, point of sale streamers, dealer signs, etc.

U. S. Supreme Court Again Rejects Schwegmann Appeal On Fair Trade Pricing

WASHINGTON, D. C. — For the second time, the U. S. Supreme Court has rejected an appeal by Schwegmann Bros. Giant Super Market, New Orleans, to review a lower court decision that the concern must observe fair trade prices set by Eli Lilly & Co. even though it had not signed a contract with the drug company.

In mid-October, the high court first refused to review the decision of the Fifth Circuit Court of Appeals, New Orleans. This ruling upheld the constitutionality of the Louisiana and Federal fair trade laws.

Then, early in November, Schwegmann Bros. again appealed to the Supreme Court, arguing that the court's refusal to review the lower court's decision left the fair trade situation in confusion.

John Schwegmann had said that if the high court turned down his second appeal, he was prepared to fight fair trade on another legal front "as long as my money and health hold out." In this event, he asserted, he would seek to have the Louisiana fair trade law declared invalid.

Norge Ups Ad Budget To Back Planned Promotions

CHICAGO—Four planned promotions with advertising concentrated to support them were revealed recently in the 1954 advertising plans of Norge Div. of Borg-Warner Corp.

David H. Kutner, Norge's director of advertising and publicity, announced the 1954 national advertising budget will be 50% larger than 1953's. He explained the increase is required for adequate support of planned promotions.

Refrigerator and freezer, gas and electric range, and spring and fall "Laundry Maids" (Norge's deluxe washer and dryer combination) promotions are planned.

Shooting for the greatest possible circulation, Norge will concentrate on its already established Garry Moore Show (CBS-TV), and will run color spreads and pages in *Life* and *Look*, and an eight-page section in the March issue of *Coronet*. This special section will tie in with the spring promotion of the Laundry Maids.

Norge is also using national media to reach specific audiences with high sales potential.

Kutner reported the firm will continue its intensive trade magazine campaign.

'Death Trap' Law Proposed For Capital; Hearing Is Set

WASHINGTON, D. C.—The District of Columbia Commissioners will hold a public hearing Dec. 21 on a proposed regulation designed to combat the abandoned refrigerator menace.

The proposed measure would make it unlawful for anyone to knowingly abandon a refrigerator, freezer, icebox, or similar container of at least 1½ cu. ft. without padlocking or removing the fastening device.

Chrysler Airtemp Begins Plant Expansion Program

DAYTON — Steel and concrete work on the expanding Dayton facilities of Chrysler Airtemp is under way, according to company officials.

Slated to be occupied in six months time is a new 93,000 sq. ft. manufacturing building which is scheduled to house Airtemp's furnace and room air conditioner manufacturing operations. About 700 employes will be added for expanded operations.

Also under construction are a 30,000 sq. ft. byproducts disposal structure, a 63,000-sq. ft. outside storage area and crane bay, and a new 300-car employe parking lot.

About 200 employes have been added recently, Airtemp said. They are filling out second and some third shift operations. Total employment, when the new building is completed, is expected to number about 3,500.

NEMA Refrigerator Sales For 9 Months Top Same '52 Period

(See table on page 31)

NEW YORK CITY — Sales of household refrigerators in the first nine months of the year by firms reporting to the National Electrical Manufacturers Association topped those for the corresponding 1952 period by more than 340,000 units, according to statistics released by the association.

However, September sales were down from both August and September of last year.

Sales for the first nine months of 1953 totaled 2,974,138, compared with 2,633,680 in the like period of 1952. Of the 1953 nine-month total, 2,676,336 units were sold in the United States, 120,903 in Canada, and 176,899 in other foreign countries.

September sales by 17 companies amounted to 231,224, against 232,981 in August and 257,362 in September, 1952. Domestic sales accounted for 212,823 units of the September total, Canadian sales 6,474, and other foreign sales 11,927.

Laber Heads Appliance Sales for Buffalo Graybar

BUFFALO—Robert S. Laber has been appointed appliance sales manager of the Buffalo and Rochester area operations of the Graybar Electric Co., with headquarters here. He succeeds Vincent J. Corsaro who resigned.

Signs Up 160 Retailers

Harry Alter Begins Fair Trade Pricing of Crosley-Bendix Major Appliances In Illinois

CHICAGO—In an unusual move designed to "provide better profits and cleaner competition," The Harry Alter Co. has adopted a new policy of distributing Crosley-Bendix appliances and television under the fair trade law of Illinois.

Revealing that it has signed fair trade agreements with 160 retailers, the company said:

"Although fair trade pricing is not new in small appliances, we believe that this is the first time that anyone has ever attempted to vigorously enforce this type of program for major appliances and TV.

"The first step in any such program, of course, is to cancel the Crosley-Bendix franchises with a certain number of known cut-price discount houses. This has been well started and will be continued.

"The second step is the firm establishment of our fair trade resale prices and the setting of a practical method of controlling trade-ins by using the industry 'Blue Book' figures as maximum allowances.

"The third step requires us to employ a reasonable amount of diligence and care in seeing that authorized Crosley-Bendix dealers observe these fair trade prices that we've established.

"This also has been begun, and already we have sought and received injunctions for fair trade violations. (These were, incidentally, the first such cases involving major appliances in Illinois history, and perhaps in the United States.) Since the law is unquestionably on our side, we will continue these efforts from now on."

The distributor asked for injunctions against Central Housekeeping Mart and Atlas Radio & Television Stores, Inc. A temporary injunction restraining the former from selling Bendix appliances at less than fair trade minimum prices was signed recently by Superior Court Judge George M. Fisher.

Atlas Radio & Television was accused of similar violations of the state fair trade law. Alter sought temporary and permanent injunctions and costs of the proceedings in both suits.

Commenting on the company's new policy, Harry Alter, president, said something has to be done in view of declining industry profit margins.

"I believe that if we can show the dealers that they can make more money selling at list price they will want to cooperate with our plan," he said. Alter said the policy will enable dealers to "sell with real confidence."

There were reports that Polk Bros. Central Appliances were no longer handling the and Bendix lines. These rumors were denied by Lester Bachman, general manager, who declared: "If the Harry Alter Co. wishes to fair trade the line, we will abide by and respect their decision."

EARN MORE MONEY in Refrigeration!

With this NEW Master Service Manual—*Just published!*

Here's the latest, up-to-the-second information on REFRIGERATION FUNDAMENTALS. Beginner or expert—this NEW 112-page book puts you ahead of competition in a rapidly developing industry. You'll find the text down to earth—filled with facts.

Seventy-eight illustrations and photographs make it easy to understand every point. Seventeen tables give you the information you need—when you need it.

K. M. Newcum has included chapters on Theory—Principles—Properties of Refrigerants—Refrigerant Cylinders—Valves and Safety Devices—Transferring Refrigerants—and Refrigerant Driers. Indexed for ready reference.

Salesmen can use this book too. Learn more about REFRIGERATION FUNDAMENTALS to help sell more. You'll find this book easy reading that pays a profit.

10-Day Trial—Be Satisfied with Refrigeration Fundamentals —or return the book and your money will be refunded.

Only $1.50 See it at your parts wholesaler or use coupon.

MAIL NOW

AIR CONDITIONING & REFRIGERATION NEWS
450 W. FORT STREET
DETROIT 26, MICHIGAN

Rush me today my copy of REFRIGERATION FUNDAMENTALS. My check or money order for $1.50 is enclosed, ☐. Send C.O.D., ☐.

Name .....

Company .....

Street .....

City ..... *State* .....

12-7-53

Westinghouse Air Conditioning

THE MOST COMPLETE LINE IN THE INDUSTRY

- Self-contained UNITAIRE® from 2 to 15 hp.
- Central plant UNITAIRE from 15 to 25 hp.
- Hermetically-sealed compressors from 2 to 100 hp.
- Water-cooled and evaporative condensers and water coolers in matching ratings.
- Complete line of coils, fans, air handling units and electronic air cleaners.

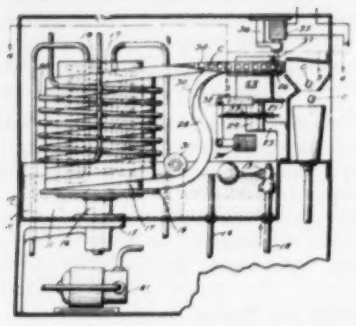
YOU CAN BE SURE...IF IT'S Westinghouse AIR CONDITIONING

J-80286 Hyde Park, Boston 36, Massachusetts

PATENTS

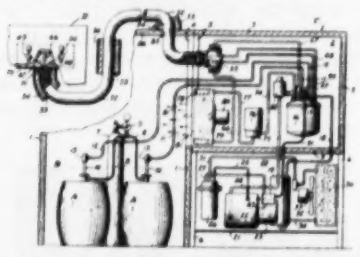
Week of July 28

2,646,666. ICE CUBE MACHINE. Matthew J. Vlasic, Youngstown, Ohio.



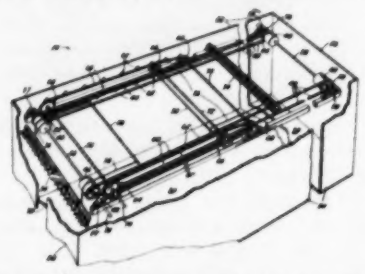
1. An ice cube forming and dispensing machine comprising an endless belt-like tray having cavities therein, a cylindrical body member and a drum rotatably positioned on their vertical axes in horizontally spaced relation to one another, refrigeration means about said cylindrical body member, said endless belt-like tray position on said cylindrical body member in a spiral pattern and looped about said drum, a tank positioned about the lower poortion of said cylindrical body member and means for moving said belt-like tray about said drum and cylindrical body member, said belt-like tray being turned one-quarter turn on said drum with respect to its position on said body member, and means for ejecting ice cubes from said belt-like tray on said drum.

2,646,667. METHOD OF AND APPARATUS FOR STORING, COOLING, AND DISPENSING BEVERAGES. Wallace R. Kromer, Cleveland Heights, Ohio.



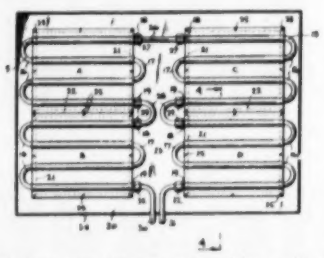
1. The method of storing and cooling beverage which comprises maintaining a body of beverage under pressure, withdrawing beverage from the body, as required, and passing the withdrawn beverage over a path immersed in a body of volatile liquid refrigerant maintained substantially within a predetermined pressure range and substantially within controlled temperature limits whereby the withdrawn beverage is quickly chilled by latent heat direct absorption by the refrigerant substantially to the controlled temperature of the volatile refrigerant, and thereafter conducting the chilled beverage away from the volatile refrigerant to a dispensing point over a path immersed in a circulating liquid maintained substantially at the desired dispensing temperature whereby to minimize temperature fluctuations in the beverage in its travel from the chilling path to the dispensing point.

2,646,899. ICE STORAGE BIN HAVING RAKES FOR MOVING THE SURFACE ICE. Egbert Cornell Stover, Brooklyn, N. Y., assignor to Flakice Corp., Brooklyn.



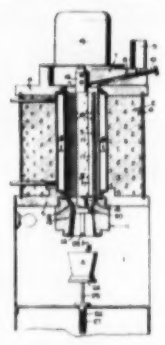
14. In a raking assembly of the character described: a series of rakes movable through an endless path, said path having a horizontally extending raking portion and a horizontally extending return portion spaced above and parallel to said raking portion; a pair of substantially parallel horizontally disposed endless-belt-type conveyers each having a lower flight adjacent to said raking path portion and an upper flight adjacent to said return path portion, said conveyers being spaced apart a distance on the order of slightly less than the length of said rakes; a plurality of flexible suspenders, each rake being attached near one end to one of said conveyers by a suspender and near the other end to the other conveyer by another suspender; said conveyers including rake supporting surfaces along the upper flight thereof upon which the rakes ride while traversing said return path portion; and a conveyer system disposed adjacent to said return path portion and including a series of pusher members, said system being geared to operate at a higher linear conveying speed than said conveyers whereby to move said rakes along said supporting surfaces at a rate in excess of the rate at which said suspenders would move said rakes.

2,646,971. HEAT EXCHANGE UNIT. Walter Raskin, Brooklyn, N. Y.



1. A heat exchange assembly unit comprising an assembly plate having a plurality or spaced and independent apertures, a plurality of tube-supporting plates secured to the assembly plate and individually covering the apertures therein, each of the tube-supporting plates having a plurality of spaced, parallel deep grooves having their open sidees facing the respective aperture covered by said tube-supporting plate, a heating and cooling tube having a plurality of straight tube sections located in the grooves in each tube-supporting plate, curved integral connections located beyond the ends of the tube-supporting plates and connecting the tube sections, connections between the tubes of the several tube-supporting plates, said connections being also located beyond the ends of said plates, connections to the extreme ends of said tubes for supplying heating or cooling fluid to the tubes of the various tube-supporting plates, the curved end connections and all other connections being located beyond the apertures and overlying a face of the assembly plate, and a protective flange on the assembly plate extending beyond the tubes and the grooves in which said tubes are positioned.

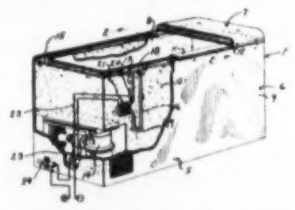
2,646,974. APPARATUS FOR MAKING REFRIGERATED COMESTIBLES. George E. Read, Santa Monica, Calif.



1. An apparatus for manufacturing a frozen comestible, involving: a vertically disposed freezing cylinder; a discharge collar at the lower end thereof; a motor mounted above said freezing cylinder; a drive shaft depending from said motor through said cylinder; a hollow journal ring connected to said drive shaft to rotate therewith and bearing against the walls of said discharge collar for restraining the extended lower end of said shaft against vibration, said journal ring being exposed to and lubricated by material passing through said discharge collar; combined scraped and impeller blades carrier by said shaft, and means for introducing a liquid into the upper end of said cylinder for engagement by said blades.

Week of August 4

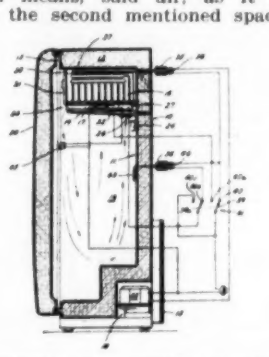
2,647,374. ANTISWEAT ANTIFROST ATTACHMENT. Charles Ward Stoner, Milwaukee, Wis.



1. In a refrigerating cabinet having an opening and a door for closing said opening, means for heating the wall of the cabinet around the opening in close proximity to the door for raising the temperature of the cabinet around the door above the new point of the air surrounding the cabinet including a closed loop of tubing having a liquid therein, said closed loop including a depending U-shaped static trap defining spaced stretches, a laterally extending loop formed in one of the stretches and means for heating the laterally extending loop.

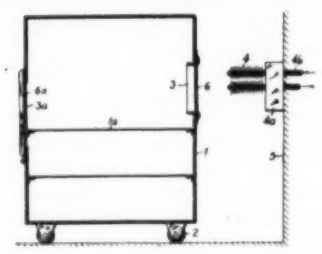
2,647,375. TWO-TEMPERATURE REFRIGERATOR WITH AUTOMATIC DEFROSTING. Elmer W. Zearfoss, Jr., Philadelphia, Pa.

9. In a refrigerator including evaporator means normally maintained at subfreezing temperatures and upon which frost collects, partition means disposed in adjacency to said evaporator means, means for removing the frost from said evaporator means, comprising: air heating means; and air propelling means automatically operable in response to energization of said heating means and cooperable with said partition means to produce a relatively low velocity circulatory flow of air from the space between said evaporator means and said partition means, through the space adjacent the opposite side of said partition means, said air, as it passes through the second mentioned space, be-



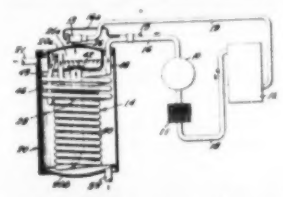
ing restricted to a region in close adjacency to said partition means by virtue of its low velocity and the stratification of air resulting from the thermal gradient existing from said partition downwardly.

2,647,376. REFRIGERATOR WITH DEFROSTING ARRANGEMENT. Filip Reinhold Carlsson, Eskilstuna, Sweden.



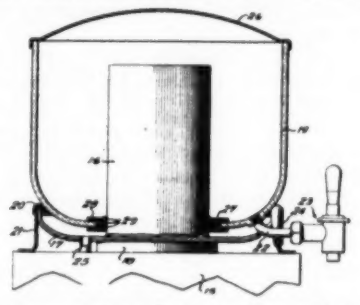
The combination of a refrigerator box and a cooling element adapted to be removably positioned therein, said cooling element being fixedly mounted on a wall or the like, roller means supporting the box to permit the displacement of the box from a cooling position, in which the cooling element is positioned within the box, to a defrosting position, in which the cooling element is positioned outside the box, said box having an opening for the cooling element, and a lid for closing said opening when the box is displaced away from the cooling element, said opening and said cooling element saving cooperating surfaces adapted to close said opening when the cooling element is positioned within said box.

2,647,377. APPARATUS FOR PROVIDING GRAVITY FLOW IN FLOODED COIL REFRIGERATION SYSTEMS. William G. Cartter and Joseph Richard Ewell, Monrovia, Calif., assignors to Day & Night Mfg. Co., Monrovia, Calif.



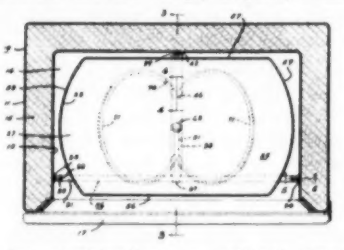
1. A refrigeration expansion coil unit having an inlet in communication with an expansion valve and an outlet in communication with a compressor, said unit having a cooling coil and a superheat coil and a header comprising a liquid refrigerant receiver adapted to receive liquid refrigerant from said expansion valve, said cooling coil having a relatively straight section depending from the lower portion of said header and in communication with a helical-wound upwardly progressing coil, which said helical coil terminates inside said header at a point above liquid refrigerant contained therein, insulating means adapted to prevent boiling of refrigerant in said straight section, said means comprising a sleeve of greater diameter defining an annular chamber between said straight section and said sleeve, means in the lowermost portion of said straight section defining a communication for liquid refrigerant from said section into said annular chamber and means defining a communication between said annular chamber and said header adjacent the bottom of said header, whereby liquid refrigerant passes from said straight section into said annular chamber and is caused to boil by the absorption of heat from a medium surrounding said sleeve and to carrry said heat upwardly by convection currents into said header, said cooling coil having a discharge in said header above the level of liquid refrigerant contained therein, said superheat coil having an inlet in said header above the level of said liquid refrigerant, a relatively straight section connecting said inlet with the lowermost portion of said superheat coil, said superheat coil being helical-wound and upwardly progressing and having a discharge in communication with the discharge of said expansion refrigeration unit.

2,647,378. SEAL FOR BEVERAGE COOLERS. Lloyd E. Rabjohn, Glendale, Calif.



1. In an apparatus for cooling and dispensing beverages: a base; means for cooling the beverage comprising an elongated heat-exchanger projecting upward from said base; a removable bowl-like receptacle surrounding said heat-exchanger so that there is a continuous space therebetween for the beverage, said receptacle having an opening through its bottom somewhat larger than the heat-exchanger so that the receptacle can be removed for cleaning by lifting it from the rest of the apparatus and subsequently replaced by lowering it around the heat-exchanger; means projecting from said base for supporting the receptacle and limiting the lowering of the receptacle around the heat-exchanger; a member of elastic material attached to the receptacle and sealing the space between the heat-exchanger and the edge of said opening when the receptacle is in its supported position, said member having a sliding fit with the heat-exchanger; and means for preventing removal of said sealing member from the receptacle until the receptacle, together with the member, is out of engagement with the heat-exchanger.

2,647,812. REFRIGERATOR SHELF. Orson V. Saunders, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio.



2. In combination, a cabinet having walls forming a compartment therein, said compartment having an access opening in one of said walls, a door normally closing said compartment access opening, an article supporting member, a slotted member for mounting said article supporting member within said compartment, said mounting member being secured against horizontal movement relative to said compartment, said supporting member having a part thereof depending into the slot in said mounting member to directly connect the same to said mounting member for horizontal sliding movement relative thereto, a continuously curved endless track associated with one of said members and permitting said supporting member to be rotated 360° relative to said mounting member, an element on the other of said members cooperating with said track, said element being located at a point spaced rearwardly from said depending part of said article supporting member and adapted to cooact therewith, said article supporting member being, when a horizontal force is applied thereto, slidable part way out of said compartment through its access opening while said door is open, the coaction between said element and said depending part of said article supporting member together with the cooperation of said element with said track being such as to rotate said article supporting member in either one of two directions simultaneously with the sliding movement thereof, means associated with said track and engaging said element during movement of said article supporting member for locking the same against removal from said mounting member, and said means being out of engagement with said element while the article supporting member is in a normal position within said compartment to permit detachment of said article supporting member from said mounting member.

NEW SUBSCRIPTION RATES

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Effective January 1, 1954 new rates will apply on all new and renewal orders for AIR CONDITIONING & REFRIGERATION NEWS.

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12-7-53

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request **to the purchasing officer under which the purchase is listed** in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Bureau of Ships, Washington, D. C.			
Refrigeration condensing unit, water-cooled, non-magnetic, ½ ton capacity, 440 volt AC.	8	549-741Q	21 Dec 53
Refrigerating condensing unit, air-cooled, non-magnetic, ⅓ ton capacity, 440 volt AC.	2	549-741Q	21 Dec 53
Ice cube freezing unit, non-magnetic.	4	549-741Q	21 Dec 53
NOTE: All above material per Spec. SHIPS R-1332, dated 19 Oct., 1953.			
General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pennsylvania			
Indicator, humidity, car 4 in. long by 2 in. wide,	500,000 ea.	3-1802B	17 Dec 53
containing three circular chemical impregnated areas. U.S. Air Force Dwg. 52B22849.			
Purchasing & Contracting Office, George Air Force Base, California			
Construction work on installation of laboratory in Hospital Building, work involves heating, insulation, and evaporative cooling.	Job	(04-609-54-18)	21 Dec 53

U. S. DEPARTMENT OF COMMERCE

Description	Quantity	Reference No.	App. Bid Date
Procurement Branch, Civil Aeronautics Administration, Washington 25, D. C.			
Thermostats, ventilation, range 70 to 95° F., both plus or minus 5°. In accordance with specification 1014A.	50 to 600 ea.	6158	15 Dec 53

CONTRACTS AWARDED THROUGH NOV. 3

General Services Administration, 575 U. S. Courthouse, 219 South Clark St., Chicago 4, Illinois

Refrigerators.—13 ea., $10,060.—Jordon Refrigerator Co., Inc., 58th & Grays Ave., Philadelphia 43, Pa.

Water Hose.—4,000 length, $27,540.—Swan Rubber Co., East Mansfield St., Bucyrus, Ohio.

General Services Administration, 49 Fourth St., San Francisco 3, California

SF-CR-151 Alterations to air conditioning system in the post office building, El Centro, Calif. Contract No. GS-09B-4744-LA-Dated Oct. 27, 1953.—$12,496.—York Imperial Co., 1461 Main St., El Centro, Calif.

Thompson To Cover Rocky Mountain Area for Frick

WAYNESBORO, Pa. — Announcement is made by Frick Co. here that D. B. Thompson will be established at Denver as sales representative, beginning Jan. 1.

D. B. Thompson

Thompson has had 20 years' experience in ice making, cold storage, refrigeration, and air conditioning work. He will travel throughout the Rocky Mountain states, where he is already well known as a refrigerating engineer and consultant. He will be under the general direction of Van J. Sparks, manager of the Frick branch office at Kansas City.

Thompson for years was active in the Mountain States Ice Association, and is a member of the ASRE. His address will be 1970 Allison St., Denver 14, Colo.

Federal Supply Distributes Servel Air Conditioning

EVANSVILLE, Ind.—The Federal Supply Co., Inc., of Oklahoma City, was recently named as distributor for Servel air conditioning throughout the state of Oklahoma.

The announcement was made by John A. Gilbreath, assistant vice president in charge of air conditioning for Servel, Inc.

Mooney Predicts Sale Of 80,000 Heat Pumps Per Year In 10 Years

ST. PETERSBURG, Fla.—Speaking on the subject of heat pumps at the third annual operation and sales conference of Florida Power Corp. held here recently, Mark Mooney, vice president of Typhoon Air Conditioning Co., Inc., predicted that "within ten years there would be 80,000 heat pumps sold annually by the air conditioning industry."

"This goal can be reached," Mooney declared "if the industry continues its rapid progress toward lower prices and compact, smart-appearing, less complicated heat pumps, which can be easily installed, readily serviced, and which will give dependable operation."

Florida Power Corp., Alabama Power Co., Gulf Power Co., Mississippi Power Co., and Georgia Power Co. have made top-level decisions to promote this packaged air conditioning product for residential and commercial distribution, it was recently reported.

Power company officials at the conference were enthusiastic about the advantages of the electric heat pump to the designer, the user, and the utility company, it was said.

Searle Dies In Fla.

CLEARWATER, Fla. — Lucius Barett Searle, 65, vice president and general manager of Sunbeam Heating & Air Conditioning Co., Chicago, died recently in Morton Plant hospital here.

4 New Depts. Take Over Operations of G-E FHP Motor Dept.

SCHENECTADY, N. Y. — Discontinuation of General Electric Co.'s Fractional Horsepower Motor Dept. and establishment of four new departments to take over its operations was recently announced by Harold A. MacKinnon, vice president and general manager of the company's Component Products Div.

The four new departments and their managers are: General Purpose Component Motor Dept., Lisle D. Hodell; Hermetic Motor Department, Ab Martin; Appliance Motor Dept., Carl W. Moeller; and Specialty Component Motor Dept., Jack J. Clarkson. All managers will have headquarters in Fort Wayne except Moeller who will be in DeKalb, Ill.

The reorganization is a further step in the company's decentralization program.

"It is being carried out," he said, "to provide more efficient direction and the best in customer service by establishing flexible, independent organizations capable of expanding to meet the ever-increasing demand for electric motors."

The General Purpose Component Motor Department, which includes a.c. motors for general-purpose application, will consist of manufacturing operations at Fort Wayne, Decatur, and Linton, Ind. Section managers appointed by Hodell are:

Lee R. Beard, manager of engineering; Leo W. Kuttner, manager of manufacturing; W. K. Williams, manager of advanced manufacturing development; Robert Wylie, manager of contributing manufacturing; William R. Boggess, manager of marketing; Clifton Duncan, manager of finance; Charles E. Slater, manager of employe relations; John F. Welch, manager of the Decatur plant; and George W. Auer, manager of the Linton plant.

Included in the Hermetic Motor Dept. are manufacturing operations at Fort Wayne and Tiffin, Ohio. Martin's staff will include:

Robert W. Snyder, manager of engineering; Willard H. Connor, manager of manufacturing; Harold E. Boles, manager of the Tiffin plant; David C. Hanson, manager of marketing; Edgar F. Waldschmidt, manager of finance; and Leon C. Swager, manager of employe and plant community relations.

Swager also is responsible for community and labor relations for all other departments at Fort Wayne.

The principal manufacturing operation of the Appliance Motor Dept. is at DeKalb, Ill., its headquarters. Assisting Moeller will be:

Lowell L. Ray, manager of engineering; Allen G. Carey, manager of manufacturing; Merton W. Edgar, manager of marketing; Alfred K. Scripture, manager of finance; and Ivan D. Rinehart, manager of employe and plant community relations.

The Specialty Component Motor Department, with all operations now concentrated at Fort Wayne but with a new plant now under construction at Jonesboro, Ark., builds all series, d.c., specialty, and defense motors. Serving as managers will be:

Irvine E. Ross, manager of engineering; Harold B. Carter, manager of advanced engineering development; Claude M. Summer, manager of the laboratory; Adolph J. Rose, manager of manufacturing; Marvin E. Hamilton, Jr., manager of the Jonesboro plant; Joseph H. Horan, manager of marketing; Paul M. Deal, manager of finance; and Walter H. Sunier, manager of employe relations.

September NEMA Refrigerator Sales Hit 231,224

Summary for September and First Nine Months, 1953 Complete Refrigerators

SEPTEMBER (17 Companies)

	Sizes	Domestic	Canadian	Foreign	Total
1.	Less than 4 cu. ft.	....	....	....	....
2.	4 cu. ft.	1,510	....	128	1,638
2.	5 cu. ft.	50	....	11	61
4.	6 cu. ft.	6,833	....	376	7,209
5.	7 cu. ft.	28,959	1,708	2,196	32,863
6.	8 cu. ft.	29,238	733	2,812	32,783
7.	9 cu. ft.	53,515	1,445	3,638	58,598
8.	10 cu. ft.	21,460	1,406	1,120	23,986
9.	11 cu. ft.	56,546	971	1,341	58,858
10.	12, 13 cu. ft. and up	14,712	211	305	15,228
11.	**Total**	**212,823**	**6,474**	**11,927**	**231,224**
	Refrigerators having two exterior doors (all sizes included in above)	22,069	321	788	23,178

FIRST NINE MONTHS (17-18 Companies)

	Sizes	Domestic	Canadian	Foreign	Total
1.	Less than 4 cu. ft.	....	....	....	....
2.	4 cu. ft.	16,186	5	1,480	17,671
3.	5 cu. ft.	961	247	183	1,391
4.	6 cu. ft.	101,161	138	13,518	114,817
5.	7 cu. ft.	424,381	22,244	33,595	480,220
6.	8 cu. ft.	384,236	17,521	37,562	439,319
7.	9 cu. ft.	718,986	39,409	50,634	809,029
8.	10 cu. ft.	361,083	27,930	15,272	404,285
9.	11 cu. ft.	528,567	11,101	20,666	560,334
10.	12, 13 cu. ft. and up	140,775	2,308	3,989	147,072
11.	**Total**	**2,676,336**	**120,903**	**176,899**	**2,974,138**
	Refrigerators having two exterior doors (all sizes included in above)	284,183	1,986	13,019	299,188

Participating companies: Admiral Corp., Appliance & Electronics Div.; Avco Mfg. Corp., (Crosley & Bendix Divs.); Coolerator Co., A Div. of I.T.&T. Corp.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Norge Div., Borg-Warner Corp.; Philco Corp., Major Appliance Div.; Quicfrez, Inc,; Seeger Refrigerator Co.; Servel, Inc. (in 3-1-53); Westinghouse Electric Corp.

CLASSIFIED ADVERTISING

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RATES for all other classifications $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

SERVICE MANAGER or equivalent work. Over 25 years' experience in refrigeration, air conditioning, and electrical service and installation. Well-grounded in theory and practice; capable of writing or instructing. Will travel or relocate if necessary. Last 4½ years was service representative for large manufacturer of refrigeration and appliances. Good references. Married, family. RAY NEAL, 713 Elmore, Green Bay, Wisconsin.

SALES ENGINEER: Experienced in all levels of air conditioning sales. Capable of developing long-range associations with architects, engineers, and major accounts. Can handle all phases of design. Training and experience in sales and engineering, including factory schools. BOX 4451, Air Conditioning & Refrigeration News.

SALES — MANUFACTURER or distributor. Broad experience; sales and application. Engineering in refrigeration, air conditioning, heating, ventilation, constant temperature, dust control (commercial, residential, industrial). Familiar with controls; electrical, pneumatic. 37 years old. Prefer Midwest or East area. Available January '54. Self-reliant, want to increase income. BOX 4452, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

MANUFACTURERS' REPRESENTATIVES wanted by Midwest manufacturer of redwood natural draft and steel induced cooling towers in 5 to 60 ton range. Must have established trade and be calling on air conditioning and refrigeration jobbers and dealers. In replying, include lines now being sold and areas served. BOX 4449, Air Conditioning & Refrigeration News.

LARGE MANUFACTURER wants product manager in sales department. Equipment includes both heating and cooling units. Engineering degree and extensive industry experience required. Age below 40. A proven man required, with ability to hold top position job, with excellent future opportunities. Starting salary $8,000.00 to $10,000.00. Eastern location. Please supply complete description of education and experience. Reply BOX 4450, Air Conditioning & Refrigeration News.

SERVICE MANAGER required by large Newark, N. J. manufacturer of room and residential air conditioners to reorganize and administer service and parts department. Duties will include the establishment of field repair shops as authorized service stations. Send full resume to: BOX 4453, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVE to call on refrigeration parts and equipment wholesalers. Complete line of chemical products for refrigeration and air conditioning industry. Sales already proven. Give complete details as to experience and territory you can cover, in first letter; include lines now represented. BOX 4454, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

ATTENTION SERVICEMEN — Send for our 1953 Catalog. Relays, expansion valves, controls, dehydrators, V belts, open & hermetic units. All new merchandise at great savings up to 50%. Sold on Money Back Guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

FOR SALE: Profitable commercial refrigeration and air conditioning sale and service business. Frigidaire dealer, located 16 miles from Los Angeles, in fast growing area. Large trade areas within a few miles. Price, $2,000.00 plus parts at inventory cost. For more information write: BOX 4455, Air Conditioning & Refrigeration News.

MISCELLANEOUS

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock, 2 year warranty. Freon refrigerant. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Sets of three, $ plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Mich.

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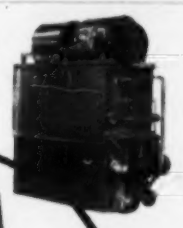

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R. D. JACOBS

J. D. HARRIS

Warren Executives--

(Concluded from Page 1, Column 4)

When the firm was incorporated in 1927, he was elected secretary and treasurer and for many years directed the company's over-all sales program.

Harris is the past president of the Commercial Refrigerator Manufacturers Association, having served in this capacity for two years. He is active in local fraternal and charitable organizations.

Upon graduation from a commercial school in Atlanta, Jacobs began his employment with Warren Feb. 22, 1928. Within a few years he had progressed through the filing and stenographic departments, had been purchasing agent, and was assigned the Warren franchise in Macon, Ga. He returned to Atlanta in 1935, in charge of the collection department.

Jacobs later attended Woodrow Wilson School of Law in Atlanta, receiving his LL.B. degree in June, 1939. He was admitted to the practice of law by the State Board of Bar Examiners of Georgia in the same year.

In 1947 he was elected secretary of The Warren Co., and he continues to hold this position along with that of executive vice president. Warren sales have continued to climb during Jacob's tenure in charge of sales, since 1950.

Heat Pump Prices--

(Concluded from Page 1, Column 2)

The price reduction effects only the product itself.

A third of the Weathertrons already in use are commercial installations.

Brundage said the price reduction would broaden the market for the all-electric unit and place it within greater reach of the average homeowner. He added that year-round air conditioners operating on the heat pump principle would be in general use sooner than many thought possible only a year ago.

Currently, the Weathertron is being sold principally in the south, southwest, and far west, and in selected areas above the Mason Dixon line. The company expects to expand distribution northward along with the development of residential air conditioning in the north.

New Store In Copenhagen

COPENHAGEN, N. Y.—Mr. and Mrs. R. L. Zehr have opened an electrical appliance store on Main St.

BWAC Formed--

(Concluded from Page 1, Column 5)

engaged in this type of finance operation, it was said.

BWAC is a wholly-owned subsidiary of Borg-Warner. L. G. Porter, administrative vice president of Borg-Warner, has been named president of BWAC. J. T. Brown is vice president and general manager, and R. C. Gerhart is assistant to the vice president.

Brown explained that, prior to BWAC's formation, certain Norge dealers, like most appliance dealers, had trouble securing adequate financing to maintain representative displays of appliances on their floors.

"Banks traditionally have been reluctant to offer this type of financing," Brown said. "This is not necessarily because any greater risks are involved, but because appliance financing is a specialized service which many banks are not equipped to give."

Distributors will shortly begin a complete indoctrination course conducted by Norge and BWAC to familiarize them with the new organization and its services.

Detroit Utility Extends Free Wiring to Dec. 31

DETROIT—Detroit Edison Co. recently informed dealers that its free wiring program for standard installations of electric dryers has been extended to Dec. 31.

Earlier, the company had advised dealers in its territory that the program would be terminated Dec. 8, the official end of the 90-day campaign conducted to boost sales of dryers. This action reportedly was protested by many retailers who had big inventories.

Both Detroit Edison and Michigan Consolidated Gas Co. have been plugging dryers since Labor Day. A spokesman for the latter said free dryer installations would be continued as scheduled through the end of the year.

E. J. Hurley, supervisor of sales promotion for Detroit Edison, said sales of electric dryers by retailers were expected to total 15,000 units by Dec. 8, compared with a campaign goal of 20,000. The gas utility was aiming for 5,000 dryer installations by the end of 1953.

Gem Refrigerator To Move Plant to Tuckahoe, N. J.

PHILADELPHIA — Gem Electrical Refrigerator Co. will move its plant from Philadelphia to Tuckahoe, N. J., it has been announced.

Plans for the construction of buildings to house the company are ready and actual erection is slated in the spring. Last summer the firm purchased 48½ acres of land in Tuckahoe. The Gem firm will manufacture its entire product at the Tuckahoe location.

Bright Future Forecast for Appliances--

(Concluded from Page 1, Column 5)

manufacturers have been liquidating them."

Price, who is a vice president of NARDA, made a prediction or two and outlined some problems:

1) High market saturation may hurt television set sales in 1954, forcing the dealer to pay more attention to white goods appliances.

2) A big problem of the business is that many good dealers are leaving the appliance field and are going into other lines, and this will continue unless all segments of the industry work together to put the dealer on a better basis of operation.

3) Such low saturation appliances as home freezers should get the bulk of promotion efforts by utilities.

Packard said that while he expected 1954-1955 major appliance unit sales to continue at the 11½-million-per-year level, some items might drop off slightly. Refrigerator sales might decline 10%, he said.

He looks to 1956 as the start of the big new replacement market, because no postwar appliance becomes 10 years old until 1956, and 10 years is the magic number in estimating major appliance replacement sales.

In discussing the upturn in new family formations, which he predicts will come in 1956, Packard said that in 1940-1946 new family formations were at the 600,000 rate; in 1947-1950 this jumped to 1,500,000; but in 1950-1953 it dropped back to 900,000. He thinks a big trend upwards will start in 1956.

The Kelvinator general sales manager also said that the appliance industry hasn't taken full advantage of the tremendous increase in the number of farm homes wired for electricity.

Big problems in appliance merchandising today are the development of greater stability among dealers, and creation of greater sales effort through better distributor-dealer cooperation.

Among the things that might be done, Packard listed the following points:

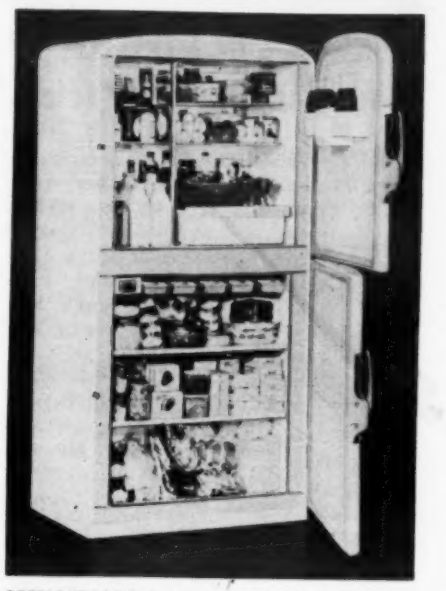
1) Trade sales power for territory. Distributors should work with fewer and better dealers.

2) Boost sales power with aggressive sales management at the retail level. There doesn't seem to be around today the type of retail sales managers that the industry had in the '30's, who built aggressive sales organizations.

3) More creative selling effort is needed. The best prospects are the ones in homes, not those on the sales floor.

4) Approach the replacement market in aggressive fashion. Retailers must learn to figure in trade-ins as part of their profit picture, as the automobile dealer learned many years ago.

Declaring that the major problem in appliance retailing "is the dealer, not the salesman," Price declared that dealers are seeking more information about how to operate their business, and he suggested that utilities launch a counseling service for dealers only. He said that NARDA is continually working on programs to assist dealers.



REFRIGERATOR is on top of this 2-door refrigerator-freezer combination designed by United Refrigerator.

United Combination--

(Concluded from Page 1, Column 2)

Each unit has a separate door with storage compartments built in for small packages, cans, and bottles. A novel device at the bottom of the freezer door permits small cans of frozen juices to be released "with just a touch."

Refrig-N-Freez is designed in "sweeping" lines with green and gold trim.

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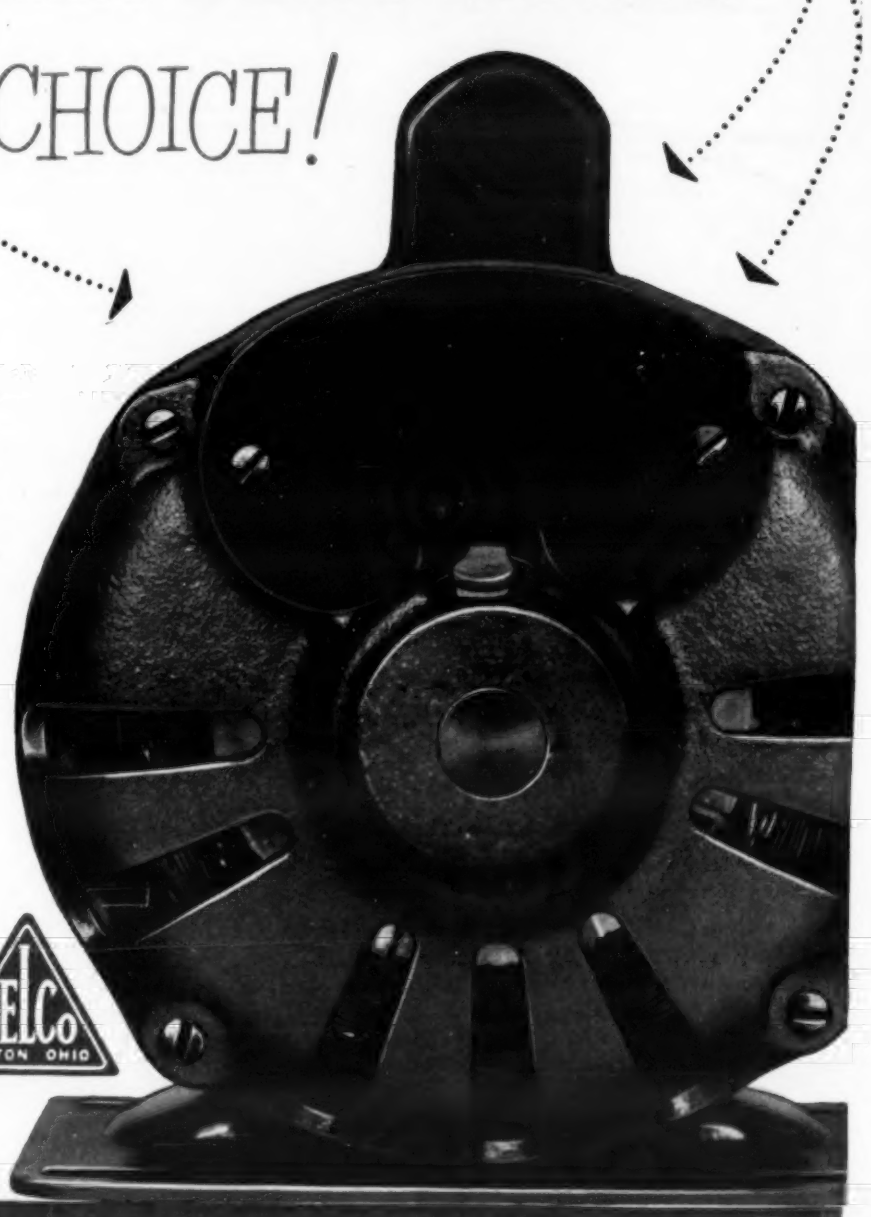

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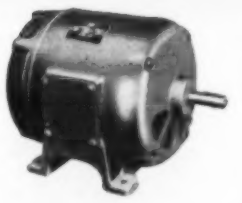
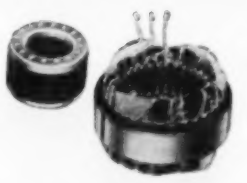


Delco Integral HP Motors. Single-phase, repulsion-start, 1 through 5 hp. Polyphase, 1 through 100 hp.



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